



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

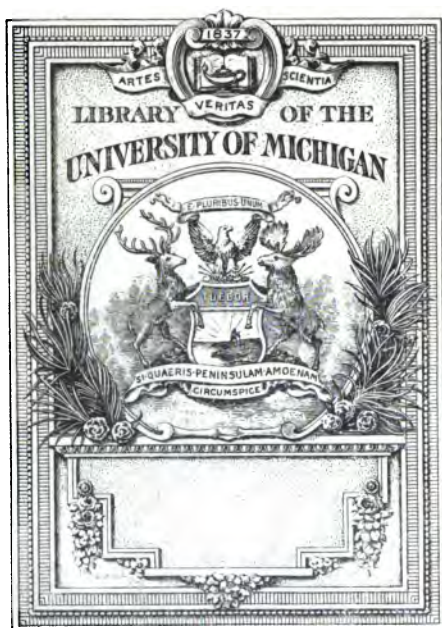
Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

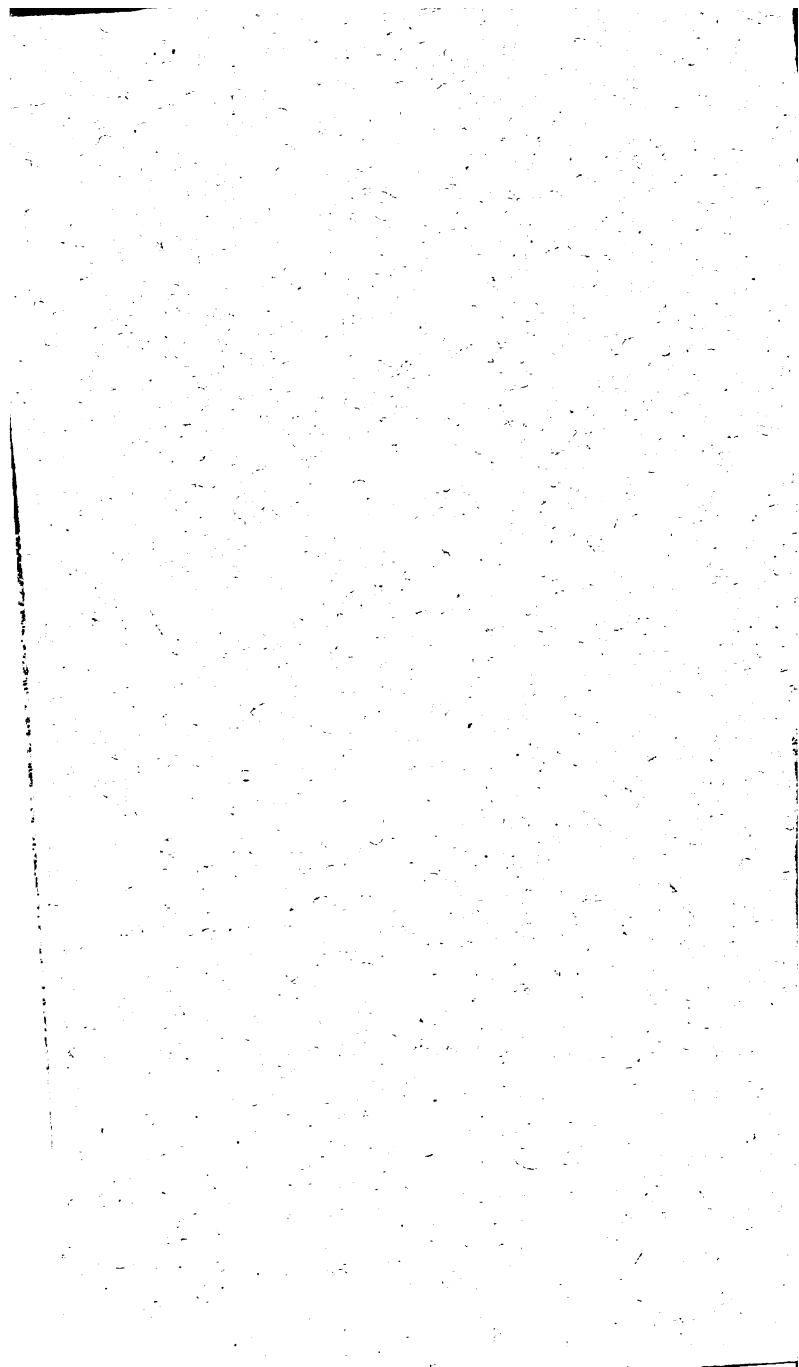


LC

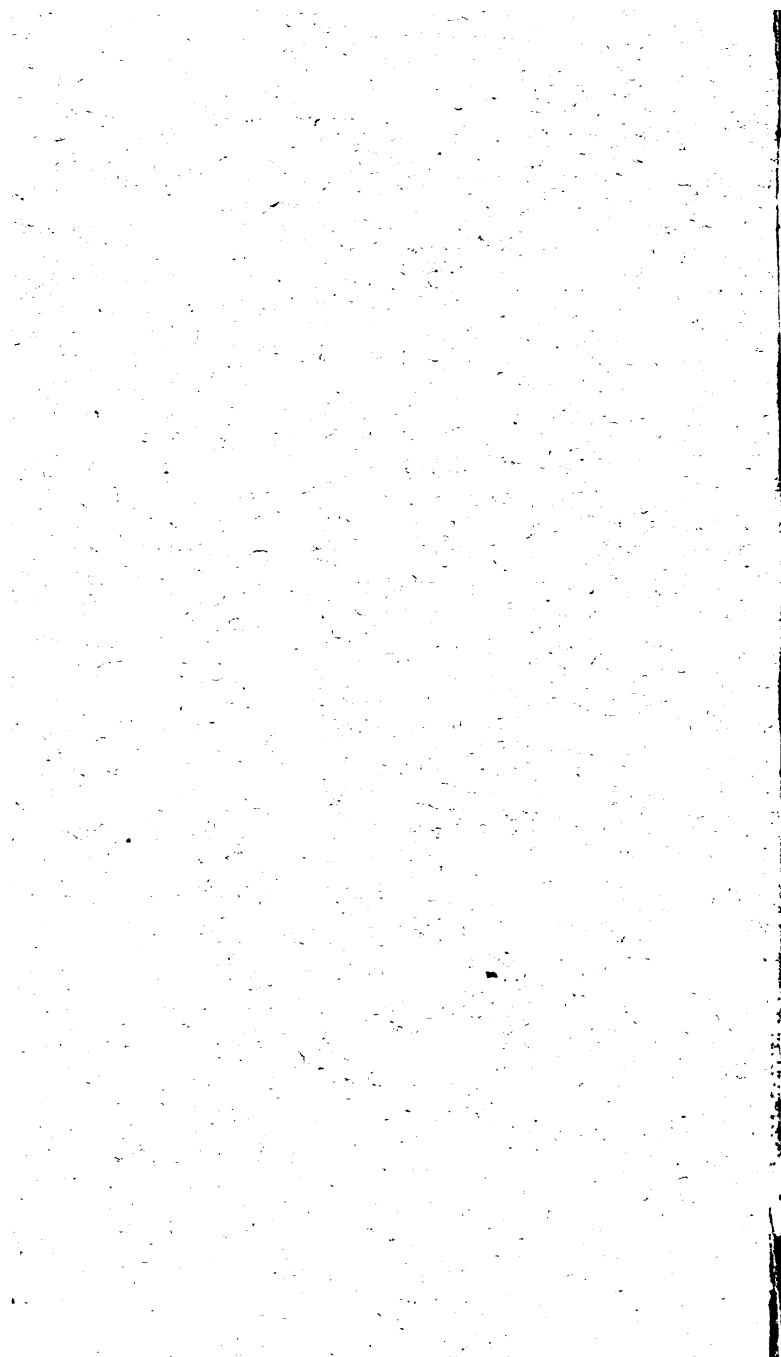
31

F79

1847







MEMORY

AND

68759

INTELLECTUAL IMPROVEMENT,

APPLIED TO

SELF-EDUCATION

AND

JUVENILE INSTRUCTION.

BY ^{revised} C. S. FOWLER,

PRACTICAL PHRENOLOGIST,

INTELLECTUAL ENJOYMENTS GREATLY SURPASS PHYSICAL.

TWENTIETH EDITION, IMPROVED.

New York:

FOWLERS AND WELLS,
PHRENOLOGICAL CABINET, No. 131 NASSAU STREET,

AND BY BOOKSELLERS GENERALLY.

1847.

Entered, according to Act of Congress, in the year 1847.

By O. S. FOWLER,

In the Clerk's Office of the District Court of the Southern District
of New York.

PREFACE.

THIS volume is the third and last of the series on the application of Phrenology to "Education and Self Improvement." Volume I. embodies the importance and means of Improving the "Physiology," including directions for preserving and regaining the HEALTH, and the effects of various physical conditions on the mentality. Volume II. shows in what perfection of character consists, and how to attain it—how to improve our own characters and those of children. Volume III. completes the series by showing how to educate the INTELLECT. It analyzes each of the intellectual faculties, and points out the means of augmenting their efficiency. It of course shows how to CULTIVATE THE MEMORY; conduct the intellectual EDUCATION OF THE YOUNG; and STRENGTHEN AND EXPAND THE INTELLECT. It especially embodies copious directions for educating OUR OWN SELVES. PERSONAL EFFORT is indispensable to intellectual attainments and greatness. All must be SELF-MADE or not made at all. Original capabilities are indeed conferred by nature, yet however great, produce very little unless assiduously CULTIVATED. Nature confers on us all several fold more talent than we develop by culture—bestows a vast amount of mentality which lies dormant for want of a true system of education—one founded in the nature of mind. That system Phrenology develops^{1*}, by showing the precise function of every faculty, and thereby just what, brought before it, will stimulate it to action, and

* These small, elevated figures, called superiors, refer to those headings of paragraphs which will be found numbered throughout these volumes, so that an idea once advanced, or principle once demonstrated, can be referred to at once. An arrangement thus simple, yet effectual, for securing all the advantages of copious repetition, without any of its disadvantages, and especially for weaving the whole into one connected whole, and showing the relations existing between subsequent conclusions and those previously established, will doubtless be duly appreciated.

thus augment its power and efficiency —. It shows all who would strengthen their intellects just how to proceed—shows even day laborers how they can far outstrip the educated classes in mental attainments. It especially inculcates HOME and SELF education, and shows both rich and poor by what MEANS it can be effected. It exposes many of the fundamental errors and evils inherent in the present system of education, from the common school to the university, and shows how to obviate them. It tells those who are acquiring a liberal education—those who are practising professions, and all who would either gain a mere subsistence or rise to stations of honor or profit by the exercise of their intellects, how to “sharpen up” their intellectual capabilities, and put them in superior working order. It tells all how to obviate forgetfulness, and so to improve MEMORY as to be able to recall any and every thing they ever knew—a power more valuable than all the mines of Mexico, and all the gold of Ophir. Nor is it difficult to PRACTISE its directions, but a present PLEASURE, as well as a future mine of intellectual wealth. In short, the Author has endeavored to render this volume a MANUAL of intellectual culture, and hopes it may deserve and find a place in every library, especially for schools, in the land, if not become a POCKET COMPANION of every youth and of all adults, and especially of mothers in conducting the education of their children. Its authorship he does not laud; but may he not invite particular attention to its SUBJECT MATTER?—for which, thanks to that new star of mental science—PHRENOLOGY.

PREFACE

TO THE IMPROVED EDITION.

THIS work has been out of print, except a limited supply at retail, for nearly two years, because the Author could not spare time to obviate the imperfections of former editions, and was unwilling, though importuned, to allow their reprint until he had given the work that thorough revision now completed. All the matter of former editions has been retained, though condensed about one-third, and also re-arranged, as well as every way improved; and about twice as much more added, including directions for applying its whole range of doctrines to SELF-EDUCATION, and juvenile instruction. In addition to all this, the phrenological organizations requisite for particular avocations, as for teachers, clergymen, editors, and many others, have been given, so that aspirants to particular avocations may know what faculties to cultivate; and as this and previous volumes show how to cultivate all the powers, they can here see at a glance just what they require to do by way of fitting themselves for the various pursuits to which they intend to devote themselves, or parents their children—an application of great PRACTICAL importance, and one which the public have long and earnestly solicited. Still farther to sim-

plify and complete these applications, a table has been added, in and by which the organs required to be cultivated and guarded, can be so marked as to refer at once to those pages which tell how to do this. The practical utility of this table will be found very great, if accompanied with that phrenological examination required in order to derive therefrom the full advantage it is calculated to confer.

This work, appertaining as it does to the laws and training of INTELLECT, has taxed the intellectual energies of its Author more than any two of his other productions. It may perhaps bear RE-PERUSAL. May it go forth to quicken and develop INTELLECT, as well as teach and incite men to REASON, and thus crown humanity with her most magnificent laurel—INTELLECTUALITY.

New York, 1846.

proper, on science, philosophy, and the study of nature ; but nearly all his time, desires, efforts, every thing, on his FEELINGS. He runs in crowds to see trifling shows and comic exhibitions, yet "passes by on the other side" of scientific lectures, and works, and subjects ; or if he reads, selects trashy novels, instead of instructive works ; the penalty of which is the superstition, ignorance, and degradation of the masses, the religious bigotry and imperfections of the many, and the erroneous opinions, evil practices, and physical sufferings of all, and even the premature death of smiling infancy and mature manhood ! Nor can the untold miseries which now scourge mankind be obviated, or even essentially diminished, till INTELLECT ascends the throne, guides opinion, and governs desire and conduct.

403. IMPORTANCE OF CULTIVATING INTELLECT.

INTELLECTUAL energy and CULTURE therefore become the highest objects of human attention, the concerns of the immortal soul not excepted ; because the former so effectually aid the latter ⁴⁰¹—theological investigations requiring more intellectual power than any other. Place a cultivated intellect, fully instructed in the laws of his being and conditions, and means of happiness, at the head of high moral sentiments, and these two at the head of his nature, and you thereby banish ignorance, close grog-shops, gambling-saloons, and dens of infamy, suppress vice, and almost annihilate depravity ; because those who know what is sinful, and that all sin induces suffering, will avoid the former merely to escape the latter ¹¹. Place intellect on the throne, and you thereby banish paganism with all its atrocities, sectarianism with all its bigoted intolerance, and disease with all its wretchedness, as well as purify and sweeten every virtue, vastly augment every human element and capability, and crown humanity with its very climax of perfection and enjoyment !

And then, again, how surpassingly rich and delightful are the treasures of knowledge, and the study of nature ! Man is so constituted that to study the laws and operations of nature—to witness chemical, philosophical, and other experiments ; to

explore the bowels of the earth, and examine the curiosities, beauties, and wonders of its surface; to learn lessons of Infinite power and wisdom as taught by astronomy; and most of all, to study living nature, and mark its contrivances and adaptations; in short, to study nature in all her beauty and perfection, particularly as unfolding perpetually the infinite wisdom and goodness of the great CREATOR of all things—constitutes the highest possible source of human happiness, besides teaching us how to attain this “chief end” of our creation^{1 2 19}. Nor are the internal pleasures of thought and the consciousness of having ascertained truth, less pleasurable. In short, “KNOWLEDGE IS POWER,” power to be and to make happy!

404. USES AND VALUE OF A RETENTIVE MEMORY.

To descant upon the utility and value of memory, is well nigh superfluous. Would not the rich gladly give their all, the necessities of life alone excepted, to be able to recall at pleasure every thing they have ever seen, heard, or known, worthy of remembrance? What would not lawyers, physicians, and scholars give for the power to recall fully every point of evidence and law, every occurrence in their practice, every fact and principle they have read? To business men, a retentive memory is still more serviceable. And how much more powerful and effective that speaker who can dispense with notes, yet say all he wishes, as well as recall to mind thoughts and arguments previously prepared? How often have readers been mortified, and almost angered with themselves, for having forgotten something they intended to have said or done? And how great the consequent inconvenience, delay, and loss, all of which a good memory would have prevented? How many even forget almost as fast as they learn! In short, in what occupation and relation in life is not a retentive memory most useful? In many it is indispensable. What richer legacy can parents bequeath their children than a strong memory? Or what misfortune is greater than forgetfulness? Or what labor more profitable than its improvement?

405. MEMORY DEFINED.

Memory recalls past occurrences, doings, acquisitions of knowledge, etc. It is not however a single faculty, else all could remember every thing past equally well ; which is not the case ; but every intellectual faculty recollects its own past functions. Thus, Locality remembers places, Form shape, Eventuality events and action in general, Causality ideas and principles, and thus of all the other intellectual powers. Hence, there are as many different kinds of memory as there are intellectual faculties ; the greater energy of some of which, and the feebleness of others, both in the same head and in different persons, cause and account for the fact, that some can remember faces yet forget names, while others remember places, almost by intuition, yet forget items. This diversity in the memories of men, entirely precludes the idea that memory is a single faculty. But, there being as many different kinds of memory as there are intellectual organs, the retentiveness of each of which increases and decreases with the energy of its organ, of course, he who has Causality large and Language small, easily remembers the substance, but forgets the words ; while he who has Causality small and Language large, forgets ideas, but remembers words ; and thus of the different degrees of strength in all the other intellectual faculties. Hence, the full development and vigorous action of ALL the intellectual powers, give a retentive memory of every thing. Nor can the latter be secured by any other means than the former. The cultivation of the memory, therefore, and the discipline of the mind, amount to one and the same thing, and are to be effected by the same instrumentalities. To strengthen the memory is to augment the intellectual capability, and by effecting the latter, we necessarily secure the former ; because both consist in enhancing the intellectual energies.

406. EXTENT TO WHICH MEMORY CAN BE IMPROVED.

Memory, in common with every other mental faculty and physical function, can be STRENGTHENED—and to a degree

almost incredible. Its organs are governed by that same law of increase by exercise shown to govern all our animal and mental powers. Indeed, all educational efforts pre-suppose such improvement, the possibility of which we think former volumes have placed beyond all manner of doubt. That same law by which exercise increases power there shown to govern the entire physiology and brain, applies to intellectual improvement with increased force, and in all its ramifications.

407. STRENGTHENING THE INTELLECTUAL POWERS BY INVIGORATING THE BRAIN.

Do parents, teachers, the young, the professional—do one and all eagerly inquire by what *means* intellect can be expanded and memory strengthened? Phrenology and Physiology answer: By increasing the power and activity of the intellectual organs. But by no other. The brain being the organ of the mind, and the conditions of both, therefore, being perfectly reciprocal^{16 17 18}, of course all mental improvement must of necessity be accompanied by increased CEREBRAL energy, and all intellectual advancement must be coincident with an increase of power and activity in the intellectual lobe. But whatever weakens this lobe of course weakens intellect. This inference is the necessary consequence of the brain's being the organ of the mind¹⁷, which renders the conditions of both perfectly reciprocal. Mental discipline therefore consists in the vigorous and active state of the intellectual *organs*, and the former can be effected only by means of the latter. His mind is best disciplined whose brain can be brought at will into the most vigorous and powerful action; and since the vigor and improvement of the memory consist in precisely the same cerebral conditions, it can also be strengthened by the same instrumentality, but by no other¹⁶. This universal law, founded on the brain's being the organ of the mind, tells all who would improve either memory or intellect, that their only means of securing this most glorious result is to augment the activity and efficiency of their cerebral organs of memory and intellect; and that whatever enfeebles the latter, necessarily weakens the former. CEREBRAL

improvement alone can enhance mental power. Nor can educational facilities strengthen the memory except IN AND BY enhancing cerebral vigor.

408. STRENGTHENING INTELLECT BY PRESERVING HEALTH.

Since memory and intellect can be improved only by augmenting the energy of the intellectual lobe ¹⁷ 407, and since the cerebral conditions are reciprocal with the physiological¹⁸, therefore the first means of strengthening both is to promote physical energy by invigorating the HEALTH; directions for effecting which are given in volume one. Hundreds might be specified whose memories have been impaired by sickness or a decline of health, but restored on its welcome return. A Frenchman, from Mexico, unable to recollect the name of a former schoolmate, who was physician to the king of France, said that ever since he came near being suffocated from sleeping in a close room filled with carbonic acid gas evolved by charcoal burnt in it, his memory had been poor, though excellent before.

Nervous diseases always impair the memory, because they enfeeble the brain. Many readers are living witnesses of a concomitant decline of both health and memory. If asked for the first and best known means of strengthening both intellect and memory, it would be, "Invigorate the BRAIN by improving the HEALTH." But the reader is referred to volume one, on Physiology, both for the proof of this vitally important doctrine, and for directions by which health may be improved, and cerebral and mental energy thereby augmented, to the illustration of which that entire volume is devoted.

409. STRENGTHENING INTELLECT AND MEMORY BY THEIR EXERCISE.

The only other means of increasing the power and activity of the intellectual organs, and of course of disciplining the mind, improving the memory, and augmenting the intellect and capabilities, is by their EXERCISE. Brain cannot be bought. No royal road to these greatest of ends exists but exercise—a road open to all. Excepting those hereditary influences

which give to some a better intellectual organization by constitution than to others, no subsequent improvement can be effected by high or low, rich or poor, but by the **EXERCISE** of the intellectual powers, excepting that increase effected by improving health⁴⁰⁶. This great law puts all upon a par, only that some enjoy greater facilities for intellectual exercise than others: The **MEANS AND MODE** to be employed by both are the same.

Facilities may promote this exercise, yet are by no means indispensable to it. The poorest laborer, even the most abject **SLAVE**, can think and remember *while at his work*. The sons of the rich, whose facilities are greatest, attain far less mental discipline than those who enjoy fewer facilities, but make a better **USE** of what they have. All of us, be we ever so poor, without books or teachers, can **EXERCISE** our minds, and thus increase their efficiency—can strengthen memory by recalling the past, though it be simply our own experience, and thus cause the blood to flow to the organ exercised⁴⁰⁷, and thus cultivate intellect.

The **FACT** that the exercise of any mental faculty proportionally augments both the volume and efficiency of its organ, and thereby strengthens the faculty exercised, was demonstrated in volume two, in which this great law was applied to the improvement of the feelings. The **MEANS** of exercising the faculties, namely, by presenting their appropriate food or objects, was also shown. Thus, presenting things to Individuality, spontaneously excites its inspecting action. Laws and causes brought to the cognizance of Causality, excite it to spontaneous action. Events spontaneously excite Eventuality; and thus of each of the intellectual faculties.

Whenever its appropriate object or natural stimulus is presented to any faculty, spontaneous action ensues, and therefore enlargement and improvement are the necessary consequences.

410. SPONTANEOUS AND FORCED ACTION CONTRASTED.

Special stress has been laid on this **SPONTANEOUS** action of the faculties—that effected by the presentation of their natural

CONTENTS.

CLASSIFICATION AND FUNCTIONS OF THE INTELLECTUAL FACULTIES.

	PAGE.
400. Man's superiority.—401. Intellect his crowning endowment.—	
402. Man's poverty of intellect.—403. Importance of cultivating intellect.—404. Uses and value of a retentive memory.—405. Memory defined.—406. Extent to which memory can be improved.—407. Strengthening the intellectual powers by invigorating the brain.—408. Strengthening intellect by preserving health.—409. Strengthening intellect and memory by their exercise.—410. Spontaneous and forced action contrasted.—411. Understanding the laws of mind facilitates its culture.—412. The first and second steps.—413. Location of the intellectual lobe.—414. Location of the physico-perceptive group.—415. Function of the physico-perceptive faculties.—416. Location, function, and analysis of the middle range.—417. Location of the reflective organs.—418. Function of the reflective faculties. - - -	15—34

24. INDIVIDUALITY.

419. Definition and location.—420. Adaptation and primitive function.—421. Large and small.—422. Importance of cultivating observation.—423. Impressions received from observation indelible.—424. Its cultivation in ourselves.—425. Studying human nature.—426. Study of Phrenology.—427. Observation the great instructor of children.—428. Existing educational systems require remodelling.—429. Observation must precede reasoning.—430. The educational system proposed by Phrenology. - - -	34—46
---	-------

25. FORM.

431. Definition and location.—432. Adaptation and function.—433. Large and small.—434. Form employed in reading and spelling.—435. Evils of learning to read too young.—436. Too early schooling engenders dislike of books.—437. Means of cultivating Form. - - - - -	46—53
--	-------

26. SIZE.

438. Definition and location.—439. Adaptation and function.—440. Large and small.—441. Means of cultivating Size.—442. The study of Geometry. - - - - -	53—55
---	-------

27. WEIGHT.

443. Definition and location.—444. Adaptation and office.—445. PAGE.
 Large and small.—446. Its cultivation. - - - - - 55—58

28. COLOR.

447. Definition.—448. Adaptation and office.—449. Large and small.—450. The cultivation of Color.—451. How to paint cheeks. - - - - - 58—61

29. ORDER.

452. Definition and location.—453. Adaptation and function.—454. Large and small.—455. The advantages of Order.—456. The cultivation of Order. - - - - - 61—64

30. CALCULATION.

457. Definition and location.—458. Adaptation and office.—459. Large and small.—460. The cultivation of Calculation.—461. How to teach arithmetic.—462. Doing a cash business.—463. Too much business. - - - - - 64—70

31. LOCALITY.

464. Definition and location.—465. Adaptation and function.—466. Large and small.—467. Cultivation of Locality: travelling.—468. Study Geography.—469. Geography for children.—470. The study of Geology.—471. Adaptation of these faculties to the inherent properties of matter.—472. Philosophy of their location. - - - - - 71—81

32. EVENTUALITY.

473. Definition and location.—474. Adaptation.—475. Large and small.—476. Improving memory by its exercise.—477. The power of memory illimitable.—478. McGuigan's experience.—479. The author's experience.—480. Recalling the past.—481. Rendering recollections pleasurable.—482. Telling children stories.—483. "Set on a bench and say A."—484. Showing children experiments. - - - - - 81—96

33. TIME.

485. Definition and location.—486. Adaptation and function.—487. Large and small.—488. Importance of periodicity.—489. Observance of periodicity.—490. Forming periodical habits in children.—491. Cultivation of Time.—492. The extent.—493. Pernicious reliance on time-keepers.—494. Employ all your time.—495. Doing first what is most important.—496. Wasting other people's

CONTENTS.

xi

time.—497. Wasting time by shortening life.—498. Rightly to improve time prepares for eternity.—499. Sin here deteriorates forever. 96—111

34. TUNE.

500. Definition and location.—501. Adaptation and primitive function.—502. Large, small, and combinations.—503. Influences of music over the mind.—504. Importance of its cultivation.—505. Means of cultivating music.—506. Right direction of music.—507. Natural and artificial music.—508. The imperfections of modern music. 111—123

35. LANGUAGE.

509. Definition and location.—510. Adaptation and primitive function.—511. Large, small, and combinations.—512. Conversational excellence.—513. Power of eloquence.—514. Eloquence natural, but crippled in youth.—515. Means of improving conversation and delivery.—516. Use good language.—517. Perspicuity, ornament, naturalness, etc.—518. Studying the dead languages.—519. Learning languages orally.—520. The study of grammar.—521. Emphasis, articulation, intonation, etc.—522. Committing to memory.—523. Allowing children to talk.—524. Using good language before children.—525. Baby talk.—526. Woman's tongue—for what bestowed.—527. Defects in the English language.—528. Phonography and its advantages.—529. Phonography a true science.—530. Pittman's and Bayley's systems.—531. Proposed invention. 123—155

36. CAUSALITY.

541. Definition and location.—542. Adaptation and office.—543. Large and small.—544. Deficiency of reason.—545. Cultivation of Causality.—546. Answering the questions of children.—547. Teaching children to think for themselves.—548. Cultivation of Causality in ourselves.—549. Exhortation to youth.—550. Study through life.—551. Making time for study.—552. Facilities for study.—553. Public libraries.—554. Public lectures.—555. Cabinets of natural specimens.—556. The true ends of government.—557. The use to be made of these cabinets.—558. Is a collegiate education desirable.—559. Association—mnemonics.—560. Agriculture.—561. The study of Astronomy.—562. Anatomy and Physiology.—563. The study of Parenology.—564. The study of Nature as a whole.—565. Study God in his works. 168—214

37. COMPARISON.

532. Definition and location.—533. Adaptation and office.—534. Large and small.—535. Inductive reasoning.—536. Cultivation of Comparison.—537. Its cultivation in children. 155—164

D. HUMAN NATURE.

338. Definition and location.—539. Adaptation and use.—540. Its cultivation.	164—168
--	---------

567. THE DEVELOPMENTS REQUISITE FOR PARTICULAR AVOCATIONS.

568. Good Teachers.—569. Clergymen.—570. Physicians.—571. Lawyers.—572. Statesmen.—573. Editors.—574. Authors.—575. Public Speakers.—576. Poets.—577. Lecturers.—578. The Phrenologist.—579. Merchants.—580. Mechanics.—581. Artists.—582. Painters.—583. Farmers.—584. Engineers.—585. Seamen.—586. Landlords, Boarding-house Keepers, and Cooks.—587. Printers.—588. Milliners, Seamstresses, fancy workers, and the like.—589. Conclusion.	170—231
---	---------

NOTE. The better to present their bearings, and the means of securing mental discipline, CAUSALITY and COMPARISON have been transposed.

Still farther to enhance the interest and utility of this work, it has been embellished with the following

ILLUSTRATIVE ENGRAVINGS.

NO.	NAME.	WHAT THEY ILLUSTRATE.	PAGE.
	A Symbolical head.	All the faculties by signs.	14
1.	Melanchthon.	Perceptives small; Reflectives large.	56
2.	Idiot.	Intellectual lobe very small.	"
3.	European brain.	" " large.	27
4.	Indian "	" " small.	"
5.	John Jacob Astor.	Physico-Perceptives very large.	28
6.	Herschel.	" " and Reflectives very large.	29
7.	Michael Angelo.	" " and Eventuality very large.	31
8.	William Pitt.	Individuality small; Eventuality large.	33
9.	Thomas Moore.	" large; " small.	"
10.	Franklin.	Reflectives very large.	"
11.	Elihu Burritt.	Individuality very large.	34
12.	Blackhawk.	Form very large; Perceptives large.	47
13.	Brunell; Engineer.	Color very small; Constructiveness large.	59
14.	Mr. Stratton; china Merchant.	Color very small.	"
15.	Captain Cook.	Locality very large, and Perceptives generally large.	71
16.	Sheridan.	Eventuality very large.	81
17.	Child.	" " " "	"
18.	Handell.	Tune " " " "	111
19.	Ann Ormerod.	" and Order small.	"
20.	Col. Gad Humphries.	Language very large.	123
21.	Edwards.	Intellect very large, Comparison in particular.	156
22.	Shakespeare.	Intellect, Comparison, Human Nature and Ideality very large.	157
23.	Tyndall.	Causality very large.	168
24.	Locke.	" " " Ideality small.	169
25.	Bacon.	Reflectives very large.	"
26.	Idiot.	Intellect very small.	"

DIRECTORY TABLE

FOR CULTIVATING THE INTELLECTUAL FACULTIES.

The four first columns refer to this work : the five last, to "Phrenology Proved, Illustrated, and Applied."

	Function.	Cultivation.	Cultivation in Children.	Reflectors.	Large.	Very large.	Full.	Moderate.	Small.
24. Individuality.	34	38	40	37	184	185	185	185	186
25. Form.	46	52	51	48	187	188	188	189	189
26. Size.	53	54	55		190	191	191	191	191
27. Weight.	55	57	57		193	194	194	194	195
28. Color.	58	60	60	61	195	196	196	197	197
29. Order.	61	64	64	63	199	199	200	201	201
30. Calculation.	64	66	67	68	202	203	204	204	205
31. Locality.	71	73	76	77	205	206	207	207	208
32. Eventuality.	81	83	91	91	210	211	212	212	213
33. Time.	96	99	100	103	215	216	216	216	217
34. Tune.	111	116	117	118	218	219	220	220	221
35. Language.	123	130	143	128	224	226	227	228	228
36. Causality.	168	173	175	174	233	236	236	237	238
37. Comparison.	155	160	162	160	241	243	243	244	244
D. Human Nature.	164	166			242				
Intellectuals.	20	184	181	198					
Perceptives	26				177				
Reflectives.	33				229				

For a full Directory Table, showing how to cultivate all the faculties, see Volume II.

SYMBOLICAL HEAD.



NUMBERING AND DEFINITION OF THE ORGANS.

- | | |
|---|---|
| 1. AMATIVENESS, Sexual and connubial love. | 18. VENERATION, Devotion—worship, respect. |
| 2. PHILOPROGENITIVENESS, Parental love. | 19. BENEVOLENCE, Kindness—goodness. |
| 3. ADHESIVENESS, Friendship—sociability. | 20. CONSTRUCTIVENESS, Mechanical ingenuity. |
| A. UNION FOR LIFE, Love of one only. | 21. IDEALITY, Refinement—taste—purity |
| 4. INHABITIVENESS, Love of home—patriotism. | B. SUBLIMITY, Love of grandeur. |
| 5. CONTINUITY, Completion—one thing at a time. | 22. IMITATION, Copying—patterning. |
| 6. COMBATIVENESS, Resistance—defence. | 23. MIRTHFULNESS, Jocoseness—wit—fun. |
| 7. DESTRUCTIVENESS, Executiveness—force. | 24. INDIVIDUALITY, Observation. |
| 8. ALIMENTIVENESS, Appetite, hunger. | 25. FORM, Recollection of shape. |
| 9. ACQUISITIVENESS, Frugality—accumulation. | 26. SIZE, Measuring by the eye. |
| 10. SECRETIVENESS, Policy—management. | 27. WEIGHT, Balancing—climbing. |
| 11. CAUTIOUSNESS, Prudence, provision. | 28. COLOR, Judgment of colors. |
| 12. APPROBATIVENESS, Ambition—display. | 29. ORDER, Method—system—arrangement. |
| 13. SELF-ESTEEM, Self-respect and confidence—dignity. | 30. CALCULATION, Mental arithmetic. |
| 14. FIRMNESS, Decision—perseverance. | 31. LOCALITY, Recollection of places. |
| 15. CONSCIENTIOUSNESS, Justice—equity. | 32. EVENTUALITY, Memory of facts. |
| 16. HOPE, Expectation—enterprise. | 33. TIME, Cognizance of duration. |
| 17. SPIRITUALITY, Intuition—prescience—spiritual revery—communion with God. | 34. TUNE, MUSIC—melody by ear. |
| | 35. LANGUAGE, Expression of ideas. |
| | 36. CAUSALITY, Applying causes to effects. |
| | 37. COMPARISON, Inductive reasoning. |
| | C. HUMAN NATURE, Perception of motives |
| | D. AGREEABLENESS, Pleasantness—suavity |

INTELLECTUAL IMPROVEMENT.

CLASSIFICATION AND FUNCTIONS OF THE INTELLECTUAL FACULTIES.

400. MAN'S SUPERIORITY.

MAN is the noblest terrestrial work of God! The most complex and perfect in mechanism and function; the most beautiful in form and majestic in mien; the most powerful to accomplish, and exalted in enjoyment and constitution—the veritable “**LORD OF CREATION!**”

401. INTELLECT HIS CROWNING ENDOWMENT.

But in what does this superiority consist? In his **PHYSICAL** perfection? In his possessing a greater number and variety of bodily organs and functions, and those more perfect than the rest of creation? In his erectness of stature? In his muscular sprightliness and power? In even the greater intensity and more perfect play of his **FEELINGS**? In his domestic affections, or his defending, arguing, aspiring, constructing, persevering, and other kindred elements? No; in neither one separately, nor in all combined. Nor even in his undying **MORAL** and **RELIGIOUS** susceptibilities, in his capability of worshipping God, and perception of right and wrong; nor yet in his self-sacrificing-kindness, nor in his moral purity; because, all his moral elements, unguided by intellect, are blind. But his superiority consists in his possessing **INTELLECT**. Not that he does not possess all these and many other gifts and graces: nor that they do not confer dignity and glory on his nature; but that intellect, especially **REASON**, man's noblest power, is indispensable to guide and crown them all! We praise Thee,

O bountiful God, for all thy wonderful works unto the children of men ! but we love Thee most for bestowing these intellectual capabilities, which enable us to perceive and apply those glorious **LAWS** which govern nature in all her loveliness, variety, perfection, and greatness. Not that these moral elements, which ally us to angels and to God, and even confer immortality itself, are inferior to intellect. Enlightened and directed thereby, they are its superiors ; yet reason is as indispensable to their perfection as eyes to the physical man. Not thus guided, they are blind leaders of propensity, and as much more sinful, and therefore painful, than mere propensity *can* become, as their nature exceeds its ; because the greater any gift, the greater the curse consequent on its perversion. The perversion of no other faculties equally corrupts, degrades, and pains. On this stock of religion with propensity, but without intellectual guidance, grew all the heathen mythology and abominations of past ages ; grow all the idolatry of paganism, and all the bigotry, sectarianism, and errors of Christendom. Though intellect without morality is despicable—and the more so the more powerful—though each is indispensable to the perfection of the other, yet intellect is the *constitutional* guide of the entire being. The man of impulse is one of misfortune and suffering. Propensity is blind, and blindly seeks pleasure in sin, which ends in sorrow, and hence requires **INTELLECT** to conduct it upon its legitimate objects, and in accordance with the laws of happiness. Intellect can incalculably augment all our feelings, desires, and pleasures, as well as double a hundred-fold every enjoyment and attainment, whether domestic, agricultural, mechanical, protective, accumulative, honorable, and even moral. Man requires most of all intellect to perceive and apply **SCIENCE AND LAW** to health, government, religious belief and practice, happiness, and more than all, to immortality !

402. MAN'S POVERTY OF INTELLECT.

Yet in what is he equally deficient ? His absolute knowledge is exceedingly limited. He expends but little time, or money, or care—not a hundredth part of either—on intellect

stimulii, or by that to which they are adapted, because this alone augments their power. Forced action is no action. As a boy flogged to school will not study when there, so studying as it were by force, when no interest is taken, but when such study is **IRKSOME**, exercises the organs but little, and therefore improves their faculties as little. Normal mental action is always pleasurable, and beneficial because pleasurable ; that is, because the function is in harmony with its primitive design. Rendering study **AGREEABLE** incalculably augments both the consequent intellectual and cerebral action, and this proportionally benefits ⁴⁰⁹. This is the grand main-spring of intellectual improvement. The scholar who dislikes his teacher learns but little, and improves his mind as little, because that teacher does not induce this required spontaneous action, which another teacher whom he likes excites, and thus benefits him by leading him to study. If this be true of teachers, how much more of studies. Those who **LOVE** their studies will exercise and thus discipline their minds ten times as fast as those who, though equally capable, dislike them ; because the former occasions this spontaneous action which improves both organ and faculty, while the latter does not. This point is all-essential and fundamental. Let it be noted and fulfilled by all who would improve either their own minds or those of others, especially of children.

411. UNDERSTANDING THE LAWS OF MIND FACILITATES ITS CULTURE.

To be successful, education must be conducted in harmony with the **NATURE AND LAWS** of mind, and adapted to its **PRIMARY FACULTIES AND CONSTITUTION**. As well attempt to navigate the ocean without the compass ; to study astronomy without the telescope ; or to do any thing else without knowing what requires to be done or how to do it, as to undertake to educate the young, or even discipline our own minds, without first knowing both the precise office of the intellectual faculties, and how to stimulate them. These, few parents or teachers even pretend to understand, and hence almost waste abundance of time and millions of money. Sufficient pains are taken and

labor expended in educating youth, to give them a general knowledge of Nature's laws and operations, as well as teach and persuade them to live virtuously, yet this is rarely imparted or even attempted. Very few teachers or pseudo-scientific men understand even the first lessons of either the laws of mind, or how it can be strengthened. These Phrenology beautifully and clearly unfolds, and thus furnishes the only successful guide to intellectual culture. In analyzing the intellectual faculties, it shows WHAT WILL STIMULATE and thus invigorate them; that is, how to STRENGTHEN MEMORY AND AUGMENT INTELLECTUAL CAPABILITY. This analysis and means of exciting intellectual action, we shall endeavor to expound and enforce in this work. Its mental philosophy will exceed the darkness of metaphysicians as much as daylight exceeds midnight; not on account of the ability of the author, but because it puts the finger of certain SCIENCE upon all the intellectual powers, and by pointing out their adaptation, shows how to promote their action by presenting their constitutional stimuli. It will thus show HOW TO DISCIPLINE MIND, IMPROVE ALL KINDS OF MEMORY, STRENGTHEN AND EXPAND THE INTELLECT, ACQUIRE AND RETAIN KNOWLEDGE, and conduct the INTELLECTUAL EDUCATION OF CHILDREN AND YOUTH—objects, both individually and collectively, of the highest possible moment to all ⁴⁰¹ ⁴⁰³, but especially to parents, teachers, and the young, as well as to those who are engaged in business, or studying or practising professions.

412. THE FIRST AND SECOND STEPS.

The first thing to be done by way of achieving this greatest of improvements, is to obtain a correct knowledge of our own or children's intellectual developments. This will show what faculties are weakest, and therefore require more especial cultivation. This knowledge may be gained either by the study of this science, or by applying professionally to those who do understand it; but the knowledge itself is essential. Next, a precise idea of the FUNCTION of the faculties to be improved is indispensable, and also of that to which they are

severally adapted ; that is, what, brought before them, will excite them to the required spontaneous action⁴¹⁶.

413. LOCATION OF THE INTELLECTUAL LOBE.

The organs of the intellectual faculties occupy the forehead. The best rule for ascertaining the amount of brain occupied by the intellectual lobe is this. Erect a perpendicular line, as in cuts 1 and 2, from the most prominent portion of the zygomatic arch—that horizontal bone which commences just in front of the ears and runs forward toward the eyes — and the amount of brain forward of this line will measure the size of this lobe. Thus the amount of brain forward of the line, A B, in the engraving of Melancthon, is great, while

PHYSICO-PERCEPTIVES SMALL, REFLECTIVES VERY LARGE, EYEBROWS SHORT AND HORIZONTAL.



No. 1. MELANCTHON.

the similar region in the idiot is small. The forehead of the former is deep and high ; of the latter low and shallow. Melancthon's intellect was powerful and comprehensive ; the idiot could not feed himself.

INTELLECTUAL LOBE VERY SMALL.



No. 2. IDIOTIC HEAD.

The reason of this rule will be rendered apparent by the following drawings of the base of the brain, which nature has partially divided into three lobes, as here represented. A A are placed at the frontal portion of the intellectual lobe, which A A, B B enclose, and which is much longer and fuller in the European than Indian brain.

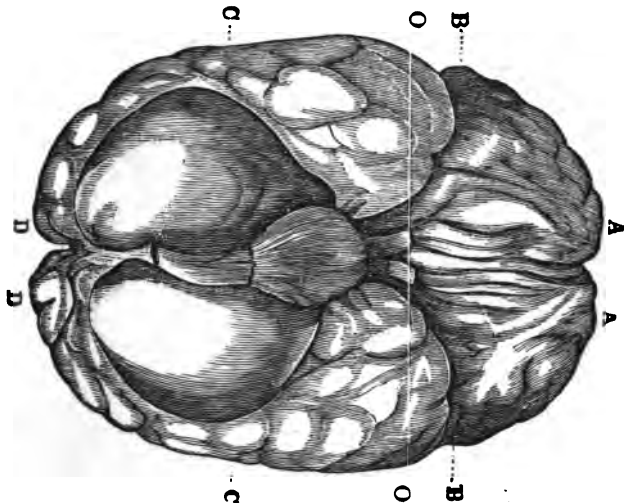
This lobe rests on the super-orbiter plate—that over the eyes—and might be aptly called the “table land” of the brain.

Nature has classified and arranged these intellectual organs into three distinct ranges or groups, the full development of each of which confers particular talents and intellectual capabilities.

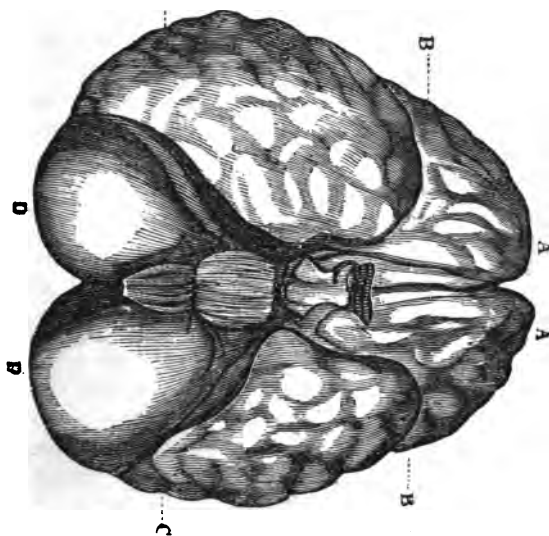
414. LOCATION OF THE PHYSICO-PERCEPTIVE GROUP

The first range is the physico-perceptive, located over the eyes. In shape they are usually long, and run from near where the optic nerve enters the brain, forward, over the eyes to the skull beneath the eyebrows. O O, in engraving 3, represent the optic nerves at their junction with one another and the brain, and those lobes originating near these nerves, and running forward towards A A, represent these organs.

No. 3 EUROPEAN.



No. 4. AMERICAN INDIAN.



PHYSICO-PERCEPTIVE GROUP, VERY LARGE.



No. 5. JOHN JACOB ASTOR

Their development pushes out the scull beneath the eyebrows, and thus renders the arch over the eyes, as well as their sockets, large, arching, and projecting anteriorly; as represented in the engraving of JOHN JACOB ASTOR. They may be large, yet not project far over the eye, because Language may be also large; or, Language may be small and the eyes therefore sunken, so that these organs may *appear* to be more fully developed than they really are, yet their projection *beyond the cheek bone*, will measure their power. The larger they are, also, the longer and more arching the eyebrows, while their deficiency leaves them short and nearly horizontal, as in the engraving of Melancthon, in whom they are small. They are immensely developed in the accompanying engraving of Herschel, whose extraordinary astrono-

PHYSICO-PERCEPTIVES VERY LARGE, EYEBROWS LONG AND ARCHED.



No. 6. HERSCHEL.

mical talent depended mainly on the power of these faculties. As, however, their full development renders the whole of the eyebrows arched, so when some are large and others small, the eyebrows will be arched over those organs that are large, but run horizontally over those that are small. Hence a close observer can ascertain their size without the aid of

touch—thus obviating one of the greatest difficulties heretofore experienced in correctly observing their size.

415. FUNCTION OF THE PHYSICO-PERCEPTIVE FACULTIES.

These faculties adapt man to the *material* world. They give knowledge and judgment of the PHYSICAL qualities and properties of matter, and of its adaptations or fitness for particular uses ; as well as perceive how to operate on it, so as to effect desired objects.

Their COMBINATIONS, however, determine their more specific directions. When very large and combined with the physical temperament and Acquisitiveness predominant, they decide correctly upon the value of lands, stocks, merchandise, and all kinds of property. All those who, like Astor, Girard, etc., have amassed immense wealth by an intuitive perception of the value of property, and what kinds will *pay* best, are enabled to do this by means of the ample development of this group. With it small, no one could become rich unless he did so mechanically, or by means of ample Causality. Combined with large Constructiveness, they give intuitive judgment of machinery, contracts, inventions, and all kinds of work, as well as greatly facilitate their execution. This combination occurs in the celebrated inventor E. B. Bigelow, of Lowell, who contrived carpet looms, and has made many other inventions. They are also amply developed in Fulton, Whitney, and great engineers and inventors generally. Most mechanical improvements are effected by means of that sagacity in managing matter which they confer.

Architecture and the arts also require their full development, combined with Ideality and the mental temperament, both of which predominate in the accompanying engraving of Michael Angelo, whose talents furnish so excellent a sample of the capabilities they bestow, aided by his large reflective faculties.

Combined with the strong and active temperament, they delight and excel in *natural science* ; see and survey nature and her operations, and confer a talent for acquiring *certain*,

PERCEPTIVES VERY LARGE.



No. 7. MICHAEL ANGELO.

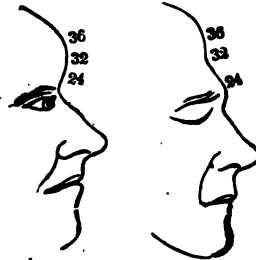
scientific knowledge in contra-distinction from literature. They are very large in Cuvier, Buffon, Eaton, Day, Hitchcock, Silliman, and all those similarly capacitated for observing nature, though true scientific excellence also requires strong reasoning powers.

416. LOCATION FUNCTION AND ANALYSIS OF THE MIDDLE RANGE.

The middle or next higher range of organs fills out the middle of the forehead, as in Pitt, but when deficient leaves a horizontal depression through its central portion, greater or less in proportion to this deficiency, as in Moore.

They impart a fact-acquiring cast of mind, readily learn a new business, give scholarship and a knowing mind, and

MIDDLE GROUP, LARGE. MIDDLE GROUP SMALL.



No. 8. PITT.

No. 9. MOORE.

easily acquire and apply knowledge; and with large Language, successfully prosecute the acquisition of history, chronology, belles-lettres, and general literature. Those in whom it is deficient cannot exhibit half they know; show off to poor advantage; and have more *in* them than they can well get out.

417. LOCATION OF THE REFLECTIVE ORGANS.

The reasoning organs occupy the upper portion of the forehead, which they fill out and widen more and more the larger

REFLECTIVES PREDOMINANT.



No. 10. FRANKLIN.

they are. When very large, with smaller perceptive, they give a high and wide, or towering, overhanging form of forehead, and cause its upper portion to project beyond the perceptive, as in the engravings of Franklin and Melancthon. Those high, wide, square, bold, prominent foreheads, as well as their consequent square and straight form of face, indicate predominant reflectives. Yet small perceptive, by causing the lower portion of the forehead to retire, render these organs more *conspicuous* and *apparently* larger than they really are, yet leave the intellectual lobe smaller and faculties weaker than if the perceptive were larger, which would render the forehead more retiring. Hence, the forehead may retreat when the reflectives are large, because the perceptive may be still larger. A sloping forehead shows, however, that the reflectives do not predominate over the perceptive.

418. FUNCTION OF THE REFLECTIVE FACULTIES.

This group takes cognizance of *laws*, and investigates *pr. principles*. It thinks, reasons, searches out the relations of cause and effect, originates ideas, investigates, analyzes, and contrives, adapts ways and means to ends, creates resources, and accomplishes much with scanty means; though adapting physical means to ends requires aid from perceptive intellect⁴¹⁸. Reasoning intellect directs while the other faculties execute. It imparts depth and strength to intellect, soundness and scope to the understanding, and originality and power to ideas and conceptions. It is less likely to manifest its power than the other intellectual groups, which impart more smartness, aptness, brilliancy, etc., but give less MIGHT of intellect. Such may have strong minds and philosophical penetration, yet often pass through life like a lion in a cage, unconscious of their latent powers; yet on great occasions, and if in responsible or difficult situations, they will be adequate to any emergency, and become the natural leaders of those whose perceptive prevail. To true *greatness* these faculties are indispensable. They hold a higher place in the mind, just as their *organs* do in the head —. They constitutionally IMPRESS and CONTROL,

not only the other faculties of their possessor, but also motive, feeling, and mind in general. They are the constitutional **KINGS** of mind and conduct. They retire in Burritt's head, and equally in his character. Hence, Franklin's reasoning powers have impressed the great mass of civilized mind, and will continue to exert a controlling influence for ages to come. Burritt astonishes and delights, but Franklin and Webster impress. Burritt will die while he lives, but reasoning intellect lives in and guides other minds long after its author has left the stage of action.

We proceed next to ascertain the **FUNCTION AND MEANS OF IMPROVING** each of the intellectual faculties.

24. INDIVIDUALITY.

419. DEFINITION AND LOCATION.

OBSERVATION: cognizance of the **IDENTITY, PERSONALITY, or INDIVIDUALITY** of bodies: power and desire to **INSPECT** individual things as **ISOLATED EXISTENCES:** curiosity to **SEE AND EXAMINE.**

INDIVIDUALITY VERY LARGE.



No. 11. BURRITT.

LOCATED just above the root of the nose. When large, it causes a proportional jutting of the lower portion of the forehead over the upper portion of the nose. It is immensely developed in Elihu Burritt, the learned blacksmith, of Worcester, Mass. The author has never seen, and probably no man living possesses Individuality equally developed. It causes the eyebrows to arch at their inner termination more and more in proportion to its size, but when it is small they come nearer together, and run towards each other as they terminate inwardly. It is small in Pitt, but larger in Moore.

420. ADAPTATION AND PRIMITIVE FUNCTION.

The material world is composed of individual objects innumerable. Thus, who can count the sands of the sea-shore, the leaves and twigs of the forest, or the component particles of matter? But for this or a kindred arrangement for dividing matter into things, our world would have been one conglomerate mass. Individual things would not have existed; whereas now our world is wholly composed of them, each of which, in its very nature, has an individual existence of its own. This arrangement in nature renders every thing a *thing*, and this faculty in man takes cognizance of this personality or identity of things. To this *necessary* property of matter, or to what is called *the divisibility of matter*, that property of bodies which allows them to be divided and subdivided indefinitely, while each subdivision is a distinct thing, this mental power is adapted. It thus puts man in relation and contact with a world full of things for his inspection, as well as excites in him an insatiable desire to examine every thing. It is therefore the LOOKING faculty. Its distinctive office is to OBSERVE THINGS. It asks, "What is this?" and says, "Show me that." It has discovered many useful improvements in the arts and sciences, Phrenology among the rest. It constitutes that door through which the cognizance of external objects enters the mind. Before we can know the uses, properties, causes, etc., of things, we must first know that such things *exist*, and of this Individuality informs us.

The first impression the mind can have of any person or thing, is of their independent existence ; so that, other things being equal, the more things one observes the more material is furnished for memory to treasure up, reason to investigate, and all the other faculties upon which to operate.

421. LARGE AND SMALL.

Those in whom this organ is developed are perpetual lookers. Nothing escapes their scrutinizing glances. Passing up a crowded street, they look in at the windows, and read the signs, and often look back to see something they have passed, or that has passed them. In reading, they prefer picture books. They want to see the inside of things, and scrutinize all that comes within their range of vision. Such might be called inveterate lookers. But those in whom this organ is small, see few things around them, and these mainly to feed the other faculties. They may keep their eyes open, yet use them but little.

422. IMPORTANCE OF CULTIVATING OBSERVATION.

In the light of this office of Individuality, how important does the cultivation of observation become ! Those who pass unnoticed, most that exists or transpires around them, little realize how much valuable information, how many texts for thought, how many valuable lessons and suggestions they lose, which quick observation would note, and thus furnish feasts for all the other faculties ; thereby greatly enhancing all the powers of the mind and enjoyments of life, besides all the pleasures of observation itself. If I were to give aspirants after intellectual attainments one item of advice only, and that the most important, it would be, "Open your eyes upon all nature and keep them open."

Adapted to this requisition for observation, nature has taken the utmost possible pains to promote this required function. She has literally crowded air, earth, and water, with every conceivable variety of curiosities, the examination of all of which, besides being intensely interesting in and of itself, dis-

closes a perpetual round of instruction. O, nature, thou art full of beautiful and wonderful works, scattered lavishly all around, all within us! Yet how few know they exist. We trample thy living teachers perpetually under foot, in our foolish and wicked scramble after mammon and vanities. Would that the scales might fall from human eyes, so that they could behold thy exhaustless treasures of knowledge and wisdom! O when will men learn to love and examine NATURE!

423. IMPRESSIONS RECEIVED FROM OBSERVATION INDELIBLE.

So constituted is the human mind, that whatever is SEEN is forever riveted on the mind. Description fails to impress, but observation fastens what it sees upon the other faculties—as it were BRANDING it into their very texture. Thus, one minute's ocular inspection of any thing—say the human skull—makes and leaves an impression incalculably more vivid and retentive than worlds of books or years of description could possibly effect. A law of mind requires things to be SHOWN, and insists on observation. Children or adults can be taught mechanics, natural science, anatomy, phrenology—any, every species of knowledge—many hundred per cent. more speedily and effectually by observation than by all other means put together. The human mind easily remembers how things appeared, and thus readily recalls whatever is associated with these appearances. Man was made to SEE, and must see effectually to progress in knowledge and mental attainments. Hence, when he cannot see the thing itself, his universal fondness for PICTURES of it. Fill a book with pictures, no matter of what, and you will sell it, whether it contains any thing else or not. Much more when they are turned to an intellectual or moral account. PICTORIAL bibles, and histories, and books, and newspapers, and every thing else it is which men seize with such avidity. A single picture often conveys more than volumes, and wholly by means, too, of this *seeing* law of mind now on the tapis. Who can question this law of mind or its efficiency? We all EXPERIENCE its truth and power perpetually!

424. ITS CULTIVATION IN OURSELVES.

Since this faculty lies at the basis of all intellectual superstructure, by furnishing the other faculties with the stock, or raw material for them to work up into their respective operations⁴⁰, its cultivation therefore becomes all important, being in fact the first and most important step to be taken towards improving mind. In order that men may recollect, Individuality must first observe. Before the Reflectives can think or investigate, this faculty must furnish them the required MATERIALS; and, other things being equal, the more vigorous its action, the more powerful and efficient theirs. How then can it be cultivated? Simply by exercising it in observing—by opening your eyes and keeping them open—not the physical eyes merely, but MENTAL optics mainly. Nature has beautifully and amply provided for the former. Indeed, to keep our eyes closed when awake is difficult. It sees itself⁴¹. We cannot well help either keeping our eyes open, or having them rest on some object. In short, to look is as natural as to breathe.

But the great error is this, "having eyes they see not." We look, look, look perpetually while awake, yet few see half they look at. In other words, men often perform the PHYSICAL part of seeing without the mental—often direct their eyes at persons and things without exercising Individuality in connexion. How many of us have passed along a street or been anywhere ninety-nine times without seeing something, always there, which we saw the hundredth time. Our eyes, too, have rested on it, yet we have not noticed it. Or even if we have, we barely observed its existence, whereas many curious things about it escaped cognizance. Less active Individuality may barely see a given person, yet not notice what is said or done, or any peculiarities, while active Individuality, with precisely the same facilities for observing, will notice twenty, perhaps fifty things about the person unseen by the other, and of course know proportionally more concerning him. Not that you should stare every one full in the face, as if you never saw any human being before, but that you

should NOTICE as far as you do look. Italians, Spaniards, French, etc., have a way of scrutinizing most minutely, so that nothing escapes their view, without gazing at you, or even appearing to notice any thing in particular, even your blunders. Others again are forever gazing and sauntering, yet notice very little. Our distinction is perceptible.

425. STUDYING HUMAN NATURE.

Especially observe MAN—the most interesting object of observation on earth! When on a steamboat, or mingling among the throng, you need not keep your eyes shut for fear of being impertinent. You are even compelled to look about you, and those around you expect to be observed. Now this is the point. NOTICE all you look at. Not only observe that such a person is in such a place, but mark his motions and manner of carrying himself, especially his head. Notice his physiognomy, and read him all through by those signs of character which all are compelled to manifest perpetually.* If they speak to you or in your hearing—for men can observe with their ears as well as eyes—note closely their INTONATIONS. These will disclose more of their real characters than even their words. Mark the various expressions of their eyes and mouth, etc., in fact all they say, do, and manifest. And thus not of one person, but of ALL YOU SEE wherever you go or are. Human beings throng around us perpetually. They are thrust continually upon our cognizance, and each of them is ALL THE TIME exhibiting—is compelled to manifest more or less character. These we can note, and “from a little learn what a good deal means.” We can thus be perpetually learning something new of human nature—that most comprehensive of all studies. All other studies are trifles compared with this, both in vastness and interest. Its facilities are commensurate with its greatness and utility. We hardly know our alphabet of human nature, whereas we might read

* The Author is developing this subject in a series of articles on Physiognomical and other signs of character, in the Amer. Phren. Jour. for 1846. and hopes to prepare a volume on this subject.

it throughout with unerring fidelity.* To do this we need **OBSERVATION MAINLY**. True, the action of other faculties is required in order to carry out these observations in their results—that is, to draw inferences from these signs of character; yet we cannot draw the inferences till we have first made the observations.

Besides human beings, thousands of natural things throughout all nature are thrust upon our cognizance wherever we go, worthy of special observation, and full of instruction. When we have humanity to observe, let this take precedence, but when we have not, or can notice other things without preventing the observation of “men and manners,” let us by all means improve every proffered opportunity to store our minds with that **KNOWLEDGE OF THINGS** which this observation alone can furnish.

426. STUDY OF PHRENOLOGY.

While the study of books does not particularly improve Individuality, that of all the sciences does—that of Phrenology especially. All who have given much attention to this subject, will bear testimony to its having increased their observing desire and power. Even in church, when you would fain exercise your religious feelings, before you were aware, you found yourselves intently inspecting this head and that, and the other; nor were you satisfied without closely scrutinizing the developments of all you saw. It is not probably too much to say, that of all other promotives of observation, Phrenology is altogether the most effectual. Its observations so thoroughly interest as to create a **SEEING MANIA** which scrutinizes everybody and every thing. And the more you learn of it, the more it will promote still further observation.

427. OBSERVATION THE GREAT INSTRUCTOR OF CHILDREN.

If this be true of adult, how much more of *juvenile* minds? Indeed, the order in which infantile intellectuality is developed begins with Individuality. The infant first **LOOKS**, then remem-

* Amer. Phren. Journal, 1846, p. 13.

bers what it has seen, and this excites intellect to draw inferences. When only a few hours old, it gazes around on things, as if saying, "Really, how many things here are! Strange world this! Full of things." A few months afterwards, this curiosity to see, handle, pull apart to see what is inside, has become a ruling **PASSION**, as all must have observed, and for the very reason just given, namely, that it may become his perpetual teacher, his intellectual **FOOD** and **DRINK**.

Corresponding with this looking propensity, is the great size of Individuality in the heads of all children. They will all be found to be fully developed, almost to deformity, by a marked protuberance commencing at the root of the nose, and extending up through the middle of the forehead, resembling that immense projection above the nose of Burrit. In them, too, more than in adults, observation conveys instruction more vividly and practically than all other means put together. With what avidity they seize every book containing pictures, and ask to be told all about them? Indeed, their **LOOKING** instinct is too strong, too unequivocal, too universal to be mistaken. Nor was it created for nought. Nor should it be overlooked in educating that mind of which it forms so great a part. Indeed, all education should acknowledge and be formed upon it, because observation is their great highway to knowledge. It should not then be hedged up, but opened wider still. In fact, as all education of mind should be conducted in harmony with the *laws* of the mind educated⁴¹, and as observation is a **PROMINENT** law of the juvenile mind, therefore they should be taught by **OBSERVATION** **MAINLY**, till this has developed both memory and reason. How quickly they learn from seeing and being shown, but how slowly from books and descriptions! This is palpable, universal **FACT**, based in a **LAW OF MIND**!

428. EXISTING EDUCATIONAL SYSTEMS REQUIRE REMODELING.

This being thus, of course existing systems of education require to be remodeled so as to become adapted to the cardinal law of mind, or rather based upon it. Yet they almost uni-

versally violate it. Instead of developing observation they actually repress it, not even allowing it its natural action. They thus CRAMP what they should develop, and do a positive damage instead of good. They actually curtail observation, and thereby weaken this faculty so all-essential to intellectual advancement. How many of us, readers, have been rebuked or chastised because we looked around the school-house, or out of its windows? Thump came the ruler on our heads, or crack the birch over our backs, because we "looked off the book," with the stern mandate and threat, "Keep your eyes on your book or I'll flay the skin off your backs." Gracious heavens! humanity flogged for trying to SEE! Not for what was bad, but merely for LOOKING! As well chastise for breathing! Almost as well stop respiration as observation; for the latter is quite as essential to intellectual life and growth as breathing is to physical!

The fact is thus palpably apparent that education is begun at the WRONG END, and conducted erroneously throughout. Instead of thus repressing observation, it should even consist mainly in SHOWING the beauties, curiosities, and operations of nature. What is there within the walls of our school-houses and seats of learning for youth to SEE? Their books, from Webster's spelling to Hedge's Logic, furnish observation no incentives or instruction. Teaching children to read first, and then from books instead of investigating nature, paralyzes instead of developing intellect. Reading is arbitrary, whereas observation is natural. The former is a task, and therefore rarely secures that intellectual ACTION so indispensable⁴¹⁰. Most studies are irksome and thus fail to excite intellectuality, while observation affords the most delightful and powerful stimulus to mental action, and therefore discipline of mind, especially juvenile, known. Learning to read, spell, write, parse, cipher, etc., rarely interests but generally disgusts, and therefore RETARDS both intellectual action and improvement; while having things SHOWN AND EXPLAINED delights beyond measure; and this calls all their intellectual organs into powerful and continued action, and thus promotes their enlargement and facilitates their subsequent action, which alone

strengthens the mind and even CONSTITUTES mental discipline⁴⁰⁰. This more than wasting five or more years of growing children on learning to read and spell which should be devoted to observation and exercise, is unnatural, injurious, and preposterous. Do children not learn by means of their ORGANS? How vain, then, all attempts to educate them till these organs are developed? Shall we not cultivate those organs first and most which are first developed, and the others in the ORDER in which nature develops them? Then, as Individuality is so early and prominently developed in children, let us COMMENCE their education by showing and explaining things? Shall we longer confine them to the study of things which they have not yet the faculties to comprehend? As well put the blind to selecting colors, and the deaf to learning music!

Granted that this proposed remodelling of existing educational systems is a bold innovation, and would demolish that idol to which parents cling as to their children themselves, and on whose altar millions are now falling a sacrifice, both physically and mentally, yet it is based in the two incontestable FACTS, that Individuality is one of the first developed and most active intellectual organs of the young; so that their OBSERVATION should be the leading instrumentality employed in their education, and that their learning to read and spell exercises, and therefore benefits, intellect but little, at the same time that it actually prevents observation and thereby enfeebles mind. Excluded from seeing things at school, and probably confined much within doors at home, no wonder that they lose their intellectual curiosity, and experience intellectual decline instead of improvement! Yet how few know the fact or its cause! Their arms, feet, or any other physical organ, laid up unused in a sling, would likewise become enfeebled. No wonder, then, that men flock in laughing thousands to see the circus clown and every other humbug and ridiculous exhibition imaginable, yet care so little for science⁴⁰¹. They crowd indeed to hear an eloquent speaker, because he rouses their feelings, which affords them so much more gratification than their sluggish intellects, because so much more powerful; yet how few love close REASONING or philosophy? This lamentable

deficiency of intellect is certainly not constitutional, but INDUCED. It is OUR fault, not nature's. She requires sufficient intellect to guide and govern the entire being⁴⁰¹, and what she requires she provides. For this required intellectual ascendancy she has provided amply, yet our imperfect education does not DEVELOP what intellect she creates, but allows it to become weak from INACTION, whereas it should AUGMENT BY CULTURE. Books precede and supersede observation and facts, whereas the tables should be turned. This begets that intellectual lassitude which deteriorates what observation would so powerfully and perpetually stimulate, and thereby strengthen.

429. OBSERVATION MUST PRECEDE REASONING.

If this new but true doctrine requires additional confirmation, it has it in that constitutional method by which the human mind arrives at most of its conclusions. Reason without fact can teach very little. Could mere reasoning ever have discovered, or can it even now perfect, Phrenology, or any other science? Unaided by experiment, can it teach us that motion is the function of muscle, sensation of nerve, vision of the eyes, etc.? Or that heat can be obtained from trees, that water will quench thirst, food satiate hunger, stones thrown up fall down again, etc., etc.? By a law of mind, observation must PRECEDE reasoning. After we have tried these several EXPERIMENTS many times over, we may then infer that like causes will produce like effects. This inductive method of observing FACTS FIRST, and then ascending through analogous facts up to the laws that govern them, is the only sure guide to CERTAIN TRUTH—the only safe method of investigating any of the operations or laws of nature. Now the juvenile mind is an adult mind in miniature, only that this inductive method of gaining knowledge appertains to the juvenile even more than to the adult. The former are compelled by an inflexible law of mind to learn most that they know from observation, FOLLOWED indeed by reason, but never by the latter first or mainly. Then let this inductive lesson be taught at first, and even constitute the main education of child.

hood. Is not this phrenological ground also philosophical—SELF-EVIDENT even? Then should not education be at once remodelled accordingly? It will be thus remodelled. Fifty years, probably twenty, will see this fundamental change effected, and demolish the present system, though thus thoroughly riveted upon the affections of parents and teachers. Strange that all the interest felt and labor expended upon schools should not have both detected and remedied this fatal error! It is too palpable and fatal to be tolerated much longer.

430. THE EDUCATIONAL SYSTEM PROPOSED BY PHRENOLOGY,

Then, is simply this. Even before children are three months old, crowd OBJECTS upon their notice. Take them into rooms and places they have not yet seen. Hold them often at the window so that they may witness what passes, and especially learn thus early to behold nature with delight! When six months old and upwards, take hold of things, and call them by their names, as plate, bowl, knife, fork, spoon, table, chair, etc. As they grow older, take them out of doors often, which will invigorate their bodies, and thereby strengthen their intellects⁴⁰⁸, as well as facilitate observation. Point out trees, leaves, flowers, fruits, animals, etc., in all their ever-varying genera and species; and when asked, "Pa, what is this? Ma, what is that?" instead of chiding them with "Do hush, child; you tease me to pieces with your everlasting questions," take special pains to explain all, and even to excite curiosity to know still more. Take them often into your fields, gardens, shops, etc., and while procuring means for their physical support, store their minds also with useful knowledge. Even if they hinder you be patient, because you are developing their immortal MINDS, which is infinitely more beneficial to them than ornamental attire or leaving them rich. Accompany them often to the museum. Show them its fish, fowls, and other animals, and tell them all about their several natures and habits. Provide them with books on natural history, filled with explanatory cuts, (what, for them to read before they have

learned their letters? No, but) so that, when they fondly clamber upon your lap, you may show and tell them still more of the wonderful works of nature!

"But I do not know enough," say many parents. Then learn. "But we cannot afford the TIME." Then make the time. Take time to do that first which is most important. But more on finding time to educate children after we have shown more fully how to do it.

23. FORM.

431. DEFINITION AND LOCATION.

Cognizance and recollection of SHAPE; memory of COUNTENANCES, and the LOOKS of persons and things seen; perception of family LIKENESSES, etc.

LOCATED partly between, yet a little above the eyes; or on each side of the cox-combe—that bony process to which the falx attaches itself anteriorly. Its development therefore crowds the eyes apart, as in the following engraving of Blackhawk, indicated by width between the eyes. When it is small, the nose near its root will be narrow, and the eyes set near together.

432. ADAPTATION AND FUNCTION.

Configuration is a NECESSARY property of matter. All natural things, even all the minute PARTICLES of matter which compose our world and its contents, have a SHAPE. No physical being or thing CAN exist without having some form. Unless this element existed in nature, nothing could possess this mark of distinction, nor have any looks or shape, so that we could recognise no person or thing before seen by this convenient means of recognizance. Or if this element existed in nature, but man had no primary mental faculty adapted to it, he might see his fellow men nine hundred and ninety-nine times in a day, yet not know them the thousandth. But with this arrangement in nature and this mental faculty in

FORM VERY LARGE.



No. 12. BLACKHAWK.

man adapting him to it, we readily recognise persons and things seen years ago, or but once before. In general this configuration of persons and things is permanent, or varies only slightly as age increases, and this faculty, by retaining the recollection of shapes before seen, identifies persons by their shape and things by their looks.

Certain things have also similarity of shape. Thus we know a maple leaf by its general resemblance to all other maple leaves; and thus of other leaves, vegetables, fruits,

animals, and persons. All tigers are analogous in configuration to all others, and thus of all classes of things in nature. As far as the eye can distinguish a person, we know him to belong to the human race by his resemblance in form to that race. Besides this general resemblance—though all have feet, body, hands, heads, eyes, noses, mouths, chins, eyebrows, foreheads, etc., yet no two human beings LOOK exactly alike. Cast your eye over any congregation, and behold that vast diversity of countenance there perceptible. No two appear any way alike. If it should consist of all nations and tribes of men, this diversity would be much greater, and most amusing. Now all this diversity of shape, besides enabling us to recognise each other, MEANS something. "SHAPE IS AS CHARACTER."* Therefore every ITEM of shape indicates its corresponding mental characteristic, and all this diversity of shape tallies perfectly with similar diversities of character; so that configuration is an unfailing index of character.

433. LARGE AND SMALL.

In proportion to its size will its possessor be able to remember when he sees persons, animals, or things a second time, that he has seen them before, and accordingly recognise them. Those in whom it is large will be able to recognise old school-mates or friends whom they have not seen for a score or more of years, and individuals whom they have but casually met before, not perhaps by name, which depends on another faculty, but by face or looks, or to remember that they have seen them before.

When small, persons are unable thus to recognise individuals, even though they often meet them in business, parties, etc., or if they merely remember to have seen them, such recollections are faint in proportion as this faculty is weak.

434. FORM EMPLOYED IN READING AND SPELLING.

We read and spell mainly by means of the SHAPE of letters and words, and therefore by the exercise of this faculty. All

* Amer. Phren. Journal for August and Sept., 1845 and 1846, p. 54

printers read proof, spell, correct typographical errors, etc., not by language, or by remembering mechanically whether a word ends in *tion* or *sion*, or is spelled with *z*, *s*, or *c*, etc., but by the appearances of words—by the **EYE** instead of by rote—by **FORM**, not language. It strikes his **EYE** as correct or incorrect, not his ear. The correctness of this point is submitted to every proof-reader and good speller in Christendom. Moreover, we never have any occasion to know how to spell words except where they are put on paper, or in order to put them on—that is, where **Form** can be employed in spelling them. This method of learning to spell is also so far superior in ease as well as durability to the present method of learning to spell by rote, as to demand the substitution of the former for that of the latter. In other words, **Form** is the **NATURAL** organ for reading and spelling; and therefore children should be taught at first to read and spell by means of the **APPEARANCES** of words, instead of, as now, by rote. Language or rote may assist, but should be altogether secondary; whereas now it is **PRIMARY**. This course will enable us to **REMEMBER** what we have learned, whereas now how few of us, even after having served a five years' spelling and reading apprenticeship, however expert we may have been as scholars, can spell correctly an ordinary page of a letter, or even many common household words! What greater **PRACTICAL** condemnation of the present system could be had than the miserably poor spelling of nearly all, even after all the pains taken?

The reason is this. We learn to spell **BY ROTE**—by the **JINGLE**, and this is forgotten soon after we leave school, whereas we should learn to read and spell by the **EYE**—by the appearances of words, which, as it is a law of mind easily to remember the looks of what we have seen, would enable us to learn much more easily, and then **RETAIN** what we learn. By adopting the change here proposed, children could learn to spell in less than half the time now consumed, and retain it twice as well—a four-fold advantage, and in one of the most important of all matters where the time and labor-saving principle, now so advantageously applied elsewhere, can possibly be employed. If this proposed change would

enable children to learn what they now do in one-fourth the time now consumed, and employ the balance either in gaining health and growth by play, or in learning three times as much as now, behold its value !

435. EVILS OF LEARNING TO READ TOO YOUNG.

Learning to read by any other method, much more by the present, requires considerable intellect—is indeed almost a herculean task,* and still more to gather the full SENSE of what is read—the only object of all reading. If, therefore, after all this sacrifice, almost waste, of time and labor, young children finally learn to read WORDS, parrot like, before they know their MEANING or can comprehend the ideas expressed, as is almost always the case, they fall into that mechanical reading of MERE words without ideas, just as the parrot says “Pretty Polly,” so apparent in readers and speakers. Too many of our ministers, though college-educated, read even the BIBLE with as much monotonous sameness as the horse treads his bark-mill rounds, without even attempting to develop its MEANING, but simply reciting it as mechanically, and indefinitely, and unmeaningly as if mere reading machines ; and some even preach in this same see-saw tone—both caused mainly by thus prematurely learning to read words before capable of understanding, or at least without comprehending, WHAT they read, and would be obviated by a postponement of reading till they can fully perceive its sense. And even then, special attention should be directed to the DEFINITION of words, and the SENSE of what is read, more than to the words themselves. They should be taught to read words merely as the MEANS of acquiring ideas.

* Cobb's new spelling-book excels all others in this important respect. It places all words spelled differently but pronounced alike in separate columns or lessons—all ending in tion in one, and all in sion in another, and all containing ee, as keep, sheep, etc, in one lesson, but all spelled with ea, as reap, leap, etc., in another. This plan is truly excellent, and the improvement thus effected of great value, because it renders the impression doubly deep and lasting by bringing both eye and ear to act in CONCERT.

436. TOO EARLY SCHOOLING ENGENDERS DISLIKE OF BOOKS.

But, too early schooling almost necessarily engenders a DISLIKE of both books and learning. Learning to read is generally IRKSOME—always and necessarily so to young children, because they have yet too little mind to take interest in it. Hence, besides learning slowly, they acquire a settled dislike of both books and school. But wait and read them stories till you first create a strong DESIRE to learn to read, so that they can read them by themselves, and, besides learning to read in one fourth the time now occupied, the DELIGHT taken in reading would secure its continuance through life, and form a permanent literary taste and intellectual cast of mind.* This point is one of the utmost importance. Its reason is obvious. Young children not only take no interest in reading, but dislike the CONFINEMENT of school exceedingly; and hence acquire a dislike of that reading which thus taxes them. But wait till they are about eight years old; meanwhile be preparing them for learning to read by showing them things⁴³⁰, and any child can be advanced farther in three months than if it had begun at three years old, and plodded along year after year till eight; and with this PARAMOUNT advantage that the latter will hate books and reading, while the former will be delighted with both⁴⁴⁰. The mother of Wesley would not let her children learn a letter till they were five years old; and the day John was five, she taught him every letter of the alphabet, and the next day, taught him to read a verse in the Bible. Postpone and then conduct learning to read and spell as here directed, and any child of ordinary capabilities can learn both in a few months. Hundreds of instances in which this course has been pursued, have practically demonstrated its feasibility.

* Cobb has introduced another very great improvement into his reading-books—that of first spelling and defining in the spelling lessons all the words used in the reading, which the scholar is required to pronounce AT SIGHT before called on to read them. This learning to define words WHEN we learn to spell them, helps to rivet both, and also teaches how to USE words as well as how to spell them. The spelling-book and dictionary should be united.

437. MEANS OF CULTIVATING FORM.

The utility of this faculty renders its cultivation exceedingly important. Since it can thus facilitate reading and spelling—and all children who have Form large, learn these branches proportionally fast—and especially since it can take that cognizance of shape which DISCLOSES CHARACTER⁴³², special pains should be taken to augment its power and activity. By what MEANS then can this desideratum be attained? By its EXERCISE. By this ONLY. That is, by OBSERVING AND REMEMBERING SHAPE. Identify or associate together persons and things and their shape, so that you can always remember them by their appearance. The extent to which PRACTICE will enable you to do this, is truly astonishing. Formerly, circuses and menageries allowed those who had paid their entrance fee in the forenoon, to pass in free in the afternoon and evening. If tickets had been given, they would have been transferred, and passed in others. Hence the door-keeper was compelled to REMEMBER who had paid. To do this he was obliged to observe sharply and minutely, not their dress, for that could be changed, but the FACES of all visitors. This he did so EFFECTUALLY as to preclude the possibility of deception, however artfully practised. He claimed this remarkable capability of “carrying faces in the eye” as a supernatural gift, whereas it consisted simply in a vigorous exercise of FORM. A similar plan is practised in our southern and western travelling routes—the collector remembering where this and that one came on board, and who have paid—all by their faces. Is not their power in this respect often remarkable? And thus perfected by OBSERVING every passenger. The English prisons have a class of officers whose special province is to detect former convicts. This they do by SCRUTINIZING closely all who are brought in; noting particularly every feature and all its peculiarities—indeed, every thing appertaining to looks and shape, and rarely fail to detect old customers. Some of our own police officers are equally gifted in this respect. A like CULTIVATION of Form will confer a like power of recollecting all those before seen

on all whose Form is well developed by nature, as well as enlarge it when small, which is still more important.

In order to IMPROVE this faculty, then, mark well the LOOKS of all you see. Notice the SHAPE of their individual features, and of all collectively, so closely as to be able to recognise them whenever and wherever you may meet them. In doing this you need not stare at them, but look sharply while you do look ⁴³⁴. Especially are we allowed and even required to observe the countenances of all with whom we converse. What better opportunity could possibly be required or had for disciplining this faculty? Nor are any too poor to exercise it perpetually and vigorously.

26. SIZE.

438. DEFINITION AND LOCATION.

Power of taking cognizance of BULK, DIMENSION, MAGNITUDE, QUANTITIES, PROPORTIONS, etc.: ability to judge of SIZE, LENGTH, BREADTH, HEIGHT, DEPTH, DISTANCE, and the WEIGHT of bodies by observing their size: capability of measuring ANGLES, QUANTITIES, PROPORTIONS, DISPROPORTIONS, PERPENDICULARS, LEVELS, etc., and departures therefrom by the EYE: etc.

Located beneath the inner terminations of the eyebrows, at their junction with the nose. It is very large in Herschel, Astor, and Cook, but small in Ann Ormerod. The following rule will measure its size correctly: It is proportional to the PROJECTION of the inner part of the eyebrows over the inner portion of the eyes. Where but little projection occurs as you pass from the latter up to the former, Size is proportionally small; but the larger, the more the former project, like the eaves of a house, over the latter. The frontal sinus may increase this projection, but of this elsewhere.

439. ADAPTATION AND FUNCTION.

MAGNITUDE appertains necessarily to all material bodies. No physical substance or thing can possibly exist without pos.

sessing BULK; that is, being large and small, both absolutely and relatively. But for this elementary property of matter, no difference would exist between a drop of water and an ocean of water, so that both were water, or between giants and pigmies, mountains and molehills. Or with this arrangement in nature, but without this faculty in man to put him in relation with large and small, all conception of dimension would have been imperceptible to us. In this event we could neither distinguish each other by the general size of our persons nor the particular size of our features, nor perceive any difference between a rain-drop and a flood. But with both this primary element of matter on the one hand, and this mental faculty adapted to it on the other, we can distinguish things by their being larger and smaller, and apply this measuring capability to most of our relations with matter.

440. LARGE AND SMALL.

LARGE Size enables and disposes the husbandman to make his fences, rows, swaths, furrows, etc., straight; the blacksmith to mould his iron and fit his shoes "by the EYE;" and thus of the tailor; the mechanic, to measure, fit, and work by SIGHT; the artist to give PROPORTION to what he makes; the grocer in cutting off butter, meat, cheese, etc., to come very near the weight required; the drover to estimate the WEIGHT of stock within a few pounds, and thus of other occupations. Indeed, it is indispensable in most avocations, and useful in all, because when Size is small, all knowledge and judgment of dimension are proportionally imperfect. Hence the great importance of improving it by culture. Yet how few ever think of doing this further than business may require?

441. MEANS OF CULTIVATING SIZE.

The method pursued by Prussian teachers will show parents, teachers, and all others how to improve this faculty. The pupils are taken to the fields, woods, mountains, etc., and asked how far it is to yonder tree, house, rock, etc. Each pupil takes a given position, and passes his judgment, which is recorded, and then the actual distance is measured, and all

are required to look once more by way of correcting and improving the eye as to distance, height, etc. Farmers can improve this faculty by estimating the number of acres in a given field, the number of bushels or tons in a certain pile; butchers in estimating the weight of cattle, etc.; carpenters and masons in plumbing and building by the eye; landscape painters, drawers, in foreshortening and giving the PERSPECTIVE to their pictures; portrait painters in making them the size of life, and proportioning all the features, and thus of other callings. In short, to improve this faculty, look at things with the view of estimating and applying this element to things.

442. THE STUDY OF GEOMETRY

Has to do mainly with measuring QUANTITIES, and of course comes more appropriately under this faculty than any other, although it calls to its aid nearly all the intellectual faculties. It should therefore form a constituent part of education, and even of children's PLAYS. Let their playthings be so constructed that they can be put together into various geometrical figures, so as to solve its principal problems. Thus they can easily be taught to solve the problem that "the squares of the two sides of a rectangle triangle are equal to the square of its hypotenuse," by having square blocks of any size, say an inch, and filling a hypotenuse, say of three inches, with nine blocks, or of five by twenty-five, and the other two sides similarly filled, will hold just as many more. Playing with geometrical blocks would soon render globe, cylinder, prism, cone, apex, segment, cube, pentagon, octagon, etc., as familiar as bread.

27. WEIGHT.

443. DEFINITION AND LOCATION.

Intuitive perception and application of the principles of GRAVITY: ability to preserve and regain the BALANCE; to keep from FALLING; RIDE a fractious horse; SKATE; carry a steady HAND; throw a stone, ball, or arrow STRAIGHT; SHOOT well;

walk ALOFT on a high and narrow beam ; climb without falling ; walk the edge of a PRECIPICE ; in short, to preserve and regain the centre of gravity.

LOCATION.—Draw an imaginary line from the middle of the eyes, when directed straight forward, upwards to the eyebrows, and Weight is located INTERNALLY of this line, in the arch of the eyebrow, while Color is located EXTERNALLY of it. When large, each fills out the eyebrows at their respective locations, but if small, allows them to run HORIZONTALLY over them.

444. ADAPTATION AND OFFICE.

ATTRACTION forms a constituent element of matter. Without it, all bodies would rise as often as fall, and be incapable of being kept in any particular position, so that nothing could have been built or done ; for what would have bound matter together ? What else keeps the particles which compose bodies from being scattered throughout space, and instead, binds them almost inseparably together ? What but gravity binds the ocean in its bed ; keeps the rivers from ascending mountains and being scattered over hill and dale ; causes the rain to fall ; binds things on the earth to its surface ; keeps it in its orbit, or renders it any way inhabitable ? Or with this element in matter, but without its corresponding faculty in man to put him in relation with it, so that he can perceive and apply it, he would have lain where gravity carried him, and been incapable of ever doing any thing to resist its sway. He could neither have walked nor even stood. But with this arrangement of attraction in nature and this faculty in man, he can convert the former to his service ; resist wind and tide ; manage machinery ; and effect beneficial ends innumerable.

445. LARGE AND SMALL.

Its ample development gives its possessor perfect control over his muscles, and directs him how instantly to regain his lost balance, and thus makes him feel safe when aloft, on the ice, on horse-back, etc., prevents his slipping much, and then tells him exactly how to prevent falling ; enables him to com-

prehend and apply motion, understand and manage mechanical and other forces, and judge of the weight and momentum of bodies; gives him a steady hand; enables him to throw, jump, etc., with precision, etc. Those in whom it is small, are proportionally deficient in these respects; feel unsafe when high up, because they know they cannot manage themselves well; are liable to slip, stumble, and fall; feel dizzy when they look over a precipice, or are up high on any thing; are liable to have their heads turn or swim; cannot apply momentum well; often lose their centre of gravity; and control their motions with difficulty.

446. ITS CULTIVATION

Then becomes highly important, yet is little practised. How rarely do any exercise it more than nature actually COMPELS, or cultivate it in children? Yet this should be commenced in infancy and prosecuted vigorously through life. Instead of holding or bracing them up so that they cannot roll over or fall, teach them to hold THEMSELVES up, or else let them roll into uncomfortable positions, thus teaching them to balance themselves, sit, and creep, early. Encourage them to stand, walk, run, climb, etc., and as early as may be, carry them upon your extended hand around the room, changing their position more and still more quickly so as to compell them to exert this faculty in order to keep from falling.

But most mothers, "more scar'd than hurt," pursue the opposite course, to the great injury of their children. They FORBID climbing by "You'll fall," and are perpetually ringing in their ears "Take care, take care, you'll fall, I'll tell you, you'll FALL." Or perhaps frighten them. Like the fidgety grandmother who charged her grand-sons never, on any account, to go near the water till they had learned to SWIM, lest they drown, these timid mothers forbid their children climbing lest they fall; whereas the very way to PREVENT their falling is to encourage their climbing; because this excites and thereby strengthens Weight, which, when developed, renders them more safe aloft than those who have it

small are on terra firma. When small, they tumble down easily—a straw keeling them over—so that thus strengthening this faculty will save them many an extra “bump” which induces disease, and injures both brain and mind. So far from restraining a faculty thus eminently and extensively useful, its training should form a part of early education as much as talking, and for a similar reason, that both are functions of our nature. Its daily and vigorous exercise should also be continued through life. Let boys learn to slide, skate, climb trees, and even perform circus feats; and let girls jump the rope, learn to ride on horseback, etc. Let adults also improve and even create occasions of augmenting its power by EXERCISE.

28. COLOR.

447. DEFINITION.

PERCEPTION, RECOLLECTION, and APPLICATION of COLORS, and DELIGHT in them: ability to discern and COMPARE their tints and shades, MATCH colors by the EYE, PAINT, etc. Located ⁴⁴⁸.

448. ADAPTATION AND OFFICE.

COLOR forms a constituent element of matter. It is thrown broadcast over all nature. It tinges, variegates, and incalculably beautifies the flowers of the field with its ever-varying tints and shades. It renders all vegetation verdant and delightful. It skirts our auroras and vespers with its golden hues, and paints the gorgeous skies and rainbows with the pencillings of divine beauty. It crimsons the rosy cheeks of health with indescribable loveliness, their beautiful COLORINGS being one of their chief attractions. In short, COLORS form a necessary ingredient of matter, and appertain to every material thing. Without them how cheerless and dreary the fields of nature and the face of creation, and how blanched the human cheek! But colors exist, and this primary mental faculty enables man to perceive, apply, and take delight in them.

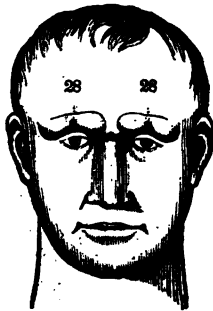
Indeed, few other sources confer more pleasure or profit—more elevation, refinement, and purity of mind and feeling.

449. LARGE AND SMALL.

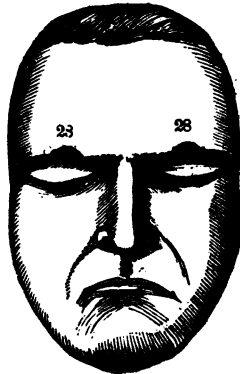
LARGE color quickly notices and discerns any peculiarities or beauties in the coloring of things seen ; experiences pleasure when it is good, but pain when defective ; and with Ideality large, delights in good paintings, and selects, matches and applies colors with good taste and judgment. With Imitation, Constructiveness, Form, and Size added, it can excel in painting. The **PLEASURE** good coloring affords, is proportionate to its activity.

SMALL color neither notices nor takes much pleasure in colors ; nor discerns interest or beauty in them ; nor is able to carry them in the **EYE** ; nor, when especially deficient, even to distinguish them.

COLOR VERY SMALL.



13. MR. BRUNELL.



14. MR. STRATTON.

Mr. Stratton, formerly a crockery merchant in Third street, Philadelphia, failed so utterly to discern the colors of his wares, that he was finally compelled to give up the business. He relates the following autobiographical anecdote. A female customer called for a wash bowl and pitcher of a given pattern, which he brought out. She wished one of the same

pattern, but of a different COLOR. Unable to distinguish any color but green, he brought out one at a venture, but ventured WRONG. She turned indignantly and walked out, as if imposed upon. On relating how strangely she conducted, and showing the pitcher, its color, being so totally different from what was ordered, explained the cause of her affront. That depression in the middle of his eyebrows, at 28, shows how deficient this organ was in his head. Many are unable to perceive any difference between the green leaves and black cherries on trees. An excellent draftsman in New Haven could see no difference between brown and red covered books and a green table cloth on which they lay. In all such cases this organ is small.

450. THE CULTIVATION OF COLOR

Is important, in proportion to the PLEASURE its exercise is capable of conferring ¹⁴⁴⁸. To increase its power and action, EXERCISE it. This can be done only by STUDYING AND ADMIRING colors—by observing and contemplating that exhaustless and ever-varying richness and perfection of coloring with which nature has painted the flowers of the field, the exquisite beauty of which “Solomon in all his glory” could not equal. Let one and all STUDY BOTANY. It is full of absorbing interest and unalloyed pleasure, besides being highly instructive. The growing attention paid to the cultivation of flowers, especially by woman, is indeed a matter of rejoicing. Let children also be encouraged to plant, tend, and admire them, arrange colors and make bouquets, and especially PAINT. Not only show them pictures ⁴⁴³, but pictures PAINTED TO LIFE—not those miserable DAUBS now given them to play with, but those WELL painted. Let painting be generally practised, especially by women, for all are endowed with more or less of this gift, and let artists both be multiplied a thousand fold, and liberally patronised, so that they can devote their entire energies to the cultivation of this refining art. Let artificial flowers be made and worn abundantly, and rich vases executed.

451. HOW TO PAINT CHEEKS.

Much as beautiful colors are pleasurable, especially when tinging the cheek of health, their ARTIFICIAL coloring is not commendable. Not that they should not be colored, for nature offers to paint them in the most beautiful of all tints imaginable. Beautiful woman has only not to RUB OFF the paint nature has already put on. Yet those who by violating the physical laws have lost the rosy hues of health and beauty, can restore them, not by rouge, but by AIR AND EXERCISE. Pallid cheeks indicate inactive lungs, and can be repainted temporally by facing a cool breeze, and permanently by facing it often, as well as rendered plump and glossy. No paint—not the superfine of Broadway, or Prince Regent, can equal that put on by HEALTH. Try it, ye who would obtain, retain, or restore your blushing, rosy charms.

29. ORDER,

"Heaven's first Law."

452. DEFINITION AND LOCATION.

METHOD : SYSTEM : ARRANGEMENT : having a PLACE for every thing, and things all IN their places, so that they can be readily FOUND : systematical arrangement of BUSINESS affairs, IDEAS, CONDUCT, etc.

LOCATED externally from Color, and beneath the junction of those bony ridges—the superciliary—which come down the sides of the head, with the arch of the eyebrows—that is, beneath the eyebrows right above the outer angles of the eyes. When very large, it forms an arch, almost an angle, in the eyebrows at this point, accompanied by its projection or hanging over, as in Astor 29, and Herschel, just internally of and above 30. It is large in Captain Cook ⁴⁴. Where small, the eyebrows at this point retire, and are straight and flat, wanting that arched projection given by large Order.

453. ADAPTATION AND FUNCTION.

METHOD and UNIFORMITY pervade all nature. They have stamped their regulating impress upon every work of God. Perfect ORDER reigns supreme in the worlds on high and in the earth below. It has reduced perfect chaos to the most delightful SYSTEM imaginable. It has arranged a place for every organ of the human body, and always puts them all in their exact places, so that they can the better perform their respective functions, Locality readily find them, and Comparison infer their location. Thus, it always puts the eyes in their places instead of in the back, or the soles of the feet, and the hands on the wrists instead of on the ankles or neck, and SYSTEMATIZES all the works and operations of nature. Indeed, but for this institution of Order, all creation would have been one vast bedlam—one grand chaos of "confusion worse confounded," to the complete destruction of its beauty, perfection, and utility. But this arrangement brings forth beauty out of deformity, and harmony out of chaos, so that all nature moves onward with a methodical precision as perfect in itself as it is beneficial to man. Yet even with this arrangement of Order in nature, but without this faculty in man adapting him to it, he could neither have applied nor even perceived it, much less converted it to beneficial ends. But both united enable him to incalculably augment his happiness through their instrumentality.

454. LARGE AND SMALL.

LARGE Order assigns particular PLACES to particular things; tries to keep them there, and is much annoyed, perhaps angered, by disorder; arranges and keeps books and papers, and conducts business, labor, etc., systematically; and appreciates and desires method in the presentation of ideas, arrangement of sentences, clauses, and words; conforms to "Law and Order" in government, religion, etc., and thus opposes lawless measures, rowdyism, and mobocracy. SMALL Order throws things down where used last; is desultory in thought, conversation, and conduct, and regardless of method in every thing.

Its primary office is to keep its own things in their allotted places. Hence, though large in children, employees, and others, yet they may allow and even create disorder, not in their own things, but those of others ; because this organ operates mainly in PERSONAL affairs. So too, method is not incompatible with coarseness and destitution of taste, almost to slovenliness ; or one may be very tidy but not at all systematic. Neatness is one thing but method quite another. The former is the product of Ideality, the latter, of Order. Again : this faculty LIKES order yet may not always keep it ; perhaps on account of sluggishness and indolence, or because of EXTREME activity and consequent PERPETUAL HURRY. DESIRE for order therefore measures its power ; yet this desire generally secures the thing desired.

455. THE ADVANTAGES OF ORDER

Are very great. That business man who does not keep his accounts straight, will surely fail ; but that industrious farmer who repairs fences and keeps his implements in order and place will thrive. If he tells John to yoke the oxen, and John asks where the yoke or chain is—if John does not know beforehand where to find the hoe, axe, scythe, rake, etc., down to the hammer and nails—mark it when you will, that farmer will fall behindhand, if not fail. But those who know just where to find whatever they want to use, because they WILL KEEP order, prosper ; for system facilitates dispatch and doubles the work done ; whereas disorder WASTES time and substance, and is ruinous in its very nature. The “ Friends ” usually have this organ large, and their women generally very large, and accordingly they are as methodical as clocks ; which doubtless contributes largely to their uniform thrift and business success. Mark this ye parents who would render your children prosperous and happy, and early instil into them this all-important principle of order and dispatch. And how much more pleasantly that family lives when all always return every thing to their places, and of course know just where always to find whatever is wanted ? Disorder also

SOURS THE TEMPER, and thus inflicts an incalculable **MORAL** injury.

Still, it is sometimes too large. Too much costs more labor and worry to keep it than it is worth. "Enough is as good as a feast," but being **EXTRA** particular has worked many a woman into a premature grave, and made many others fretful all their lives.

456. THE CULTIVATION OF ORDER,

Therefore, becomes as important as system is useful. To enhance its power, **BE** methodical. Arrange tools, accounts, papers, every thing, and then **KEEP** them arranged. Especially **REPLACE** what you use. This is the main element of order, after all. Brush up the outward man. Cleanse the person. Exchange soiled linens. Preserve **PERSONAL** order.* Especially observe **INTELLECTUAL AND MORAL METHOD**; and if unmarried, beware how you "join hands" with one who is forever getting **READY** to go or do; for this indicates either disarrangement so that they cannot find their things, or else more **NICENESS** than dispatch. To train **CHILDREN** up to habits of order, is doubly important. Give them a drawer or trunk of their own⁴⁵⁴, and encourage and require them to arrange and keep all their things in specific places—to fold and lay away their garments; put up their hats; replace their playthings; lay their clothes at night where they can be found in the dark, or dress quickly in case of fire; keep their books whole and in place; and **TAKE CARE** of every thing.

30. CALCULATION.

457. DEFINITION AND LOCATION.

Cognizance of **NUMBERS**: ability to reckon figures **IN THE HEAD**: **NUMERICAL** computation: **MENTAL** arithmetic: intu-

* Some will retort, "Physician, heal thyself. Keep yourself more trim and tidy." Yes, when I've nothing to do more important; but let me first methodize my **MENTAL** productions.

itive perception of the RELATIONS of numbers to each other: ability to ADD, SUBTRACT, MULTIPLY, DIVIDE, RECKON FIGURES, CAST ACCOUNTS, etc., in the MIND, unaided by arithmetical rules or figures: MEMORY of numbers.

LOCATED externally of Order, and beneath the outer terminations of the eyebrows; which, when it is large, extend OUTWARDLY, far beyond the eyes, and as they terminate, turn upwards or outwards towards the ears, as at 30, in Herschel. It is immensely developed in Astor, and very large in Cook ⁴⁶⁴. When it is small, the eyebrows are short at their outer ends, passing but little beyond the outer angles of the eyes, and NOT bending outwards and upwards towards the ears, as in cases when it is large. This rule is simple but effectual.

458. ADAPTATION AND OFFICE.

NUMBER appertains of necessity to every thing and collection of things in nature. That is, things can be COUNTED, nor can we HELP regarding them as one, two, three, four, etc. Unless this were so, no difference could have existed between one and millions, or any such thing as counting or reckoning been possible. Or if this faculty were effectually blotted from the human mind, it could perceive no difference between few and many—between one dollar and hundreds of thousands, which would utterly preclude all business—all numerical transactions. But with this institute of nature on the one hand, and this calculating mental faculty on the other, we can order and count out any given number of things; reckon dollars and cents; arrange things numerically; solve arithmetical sums and problems; and calculate figures almost illimitably. Its uses are therefore incalculably great.

459. LARGE AND SMALL.

LARGE Calculation reckons costs and accounts and sums up amounts in the HEAD often more correctly and rapidly than with slate and pencil, and has a natural aptitude for arithmetical calculations in general. MENTAL arithmetic and REMEMBERING numbers are its more specific provinces. Some

instances of extraordinary calculating powers are on record. Zerah Colburn was one, and Bidder is another.

SMALL Calculation dislikes figures; reckons them in the head slowly and with difficulty and then often makes mistakes; becomes confused, and often forgets the results just worked out, etc. George Combe, though so eminently gifted in other respects, is deficient here. After having obtained his receipts in Lowell, he sent them to one and then another whom he owed, with the request that each would take out the amount due him.

460. THE CULTIVATION OF CALCULATION

Is therefore exceedingly important, and should be vigorously prosecuted by all through life. To do this, rely upon the head both for casting and remembering accounts, as well as embrace and create opportunities when riding, walking, sitting, etc., to calculate **MENTALLY**. Time your speed by the mile-stones, and reckon from the data thus obtained how many miles per hour, day, month, etc., or count the number of rails in a crook of fence, or crooks per mile, and make similar calculations frequently. Or if to reckon **DOLLARS AND CENTS** be more agreeable, as aiding **Acquisitiveness**, calculate the prices of such things as you have occasion to buy, sell, or exchange; cast the cost of goods at different prices and in different quantities; reckon in your head the prices of what you buy and sell, etc. Clerks and business men in particular should practise this or a kindred course. **Arithmetical** rules with slate and pencil, may perhaps be occasionally employed as **ASSISTANTS** merely, but rarely if ever as principals. Colburn's mental arithmetic exceeds all other computing systems, both for strengthening Calculation and facilitating business. Besides these exercises, **CHARGE** your memories with amounts due, prices, statistics, the numbers of houses, dates, and every thing appertaining to figures. In short, **EXERCISE** this faculty more and more the more you would improve it. The extent to which its power may be carried by these means is truly astonishing. The Author knows an

ignorant but sensible man, unable to read, write, or cipher, who has often done business to the amount of hundreds of dollars per week, but who keeps most of his transactions in his head, and said he never had any confusion in his accounts till he trusted to books kept by his son-in-law. When young and at work by the year he took up wages as he wanted, but made no minute except in his head, yet usually found his recollections agreed with the books kept by his employers. Mr. White an excellent dentist in Philadelphia, says that his wife's uncle, though unable to read or write, has done business to the amount of hundreds of thousands annually, yet was never known to mistake the exact amount due either from or to him till he become intemperate. The *Missionary Herald* of June, 1843, speaking of the Gaboon merchants—a tribe on the coast of Africa—states as follows: "There are a few who transact business to the amount of twelve or fifteen thousand dollars a year. How they manage a business of this extent, and in the smallest fractions and driblets, without the aid of any written accounts, is very surprising. It is done, however, and with the utmost accuracy, without any other aid than that of the memory."

Is there, in the light of these FACTS any end to the extent to which this faculty may be improved? Shall civilized life fall behind African savages in this respect? But we do not properly CULTIVATE it, and hence its deficiency.

461. HOW TO TEACH ARITHMETIC.

To cultivate this faculty in children, do not wait till they are old enough to cipher, and then require them to work out sums with the slate and arithmetic, but teach them to COUNT young, which all children love to do, and proceed PRACTICALLY, step by step, as they can comprehend the elementary principles of arithmetic. Nature incalculably excels art. Hence, teach them to calculate MENTALLY, and by slate and rules afterwards. This calculating in the head so little, and mechanically so much, causes and accounts for its general feebleness; whereas fully to develop its original powers by ample exer.

cise, would render men so expert in casting and recollecting accounts MENTALLY as almost to supersede "book-keeping by double entry." Pursue this course in teaching arithmetic, and then let it be duly cultivated through life, and the power both to calculate and remember would be so great as to allow us to dispense with this wearing system of "keeping books," which is now ekeing out the lives of so many thousand clerks by wretched inches.* A majority of our merchants are dyspeptic. Standing or sitting bent over their desks, especially while growing, is one cause. This growing evil should be obviated by calculating mainly in the head. It can be still further obviated by

462. DOING A CASH BUSINESS.

The saving of human time and health which closing business transactions ON THE SPOT by PAYING DOWN would effect, would be incalculable. Fewer clerks could do much more business, and also save the precious HEALTH AND LIFE³⁰ of

* Since the text was written, the author has seen a young man who teaches a new method of numerical computation which promises completely to eclipse and supersede arithmetic and algebra—only a shorthand system of arithmetic—as now taught. Of the power of his system the Tribune remarks as follows:—

"A MATHEMATICAL MARVEL.—We were called upon on Monday by Mr. PETER M. DESHONG, a young Pennsylvanian, already widely famous for his wondrous dealings with figures. He is not singular in his ability to solve any mathematical problem INSTANTER—Zerah Colburn and others have done that before him—but he assures us that he can IN HALF AN HOUR impart his skill to any one else, which no other, within our knowledge, has been able to do. He will add up a sheet of figures as fast as he can set down the product, divide or multiply any number by any number in five seconds, extract the cube or square root of any string of figures you may set down far quicker than you can set them down, in dividing give you the Remainder first and the Dividend afterward, etc., etc. This is something more than a wonder—it is a gigantic advance in the means of acquiring knowledge. We had mentally given up the idea of ever adding to our humble stock of knowledge in this line; but we shall learn Mr. Deshong's secret or system the first half hour we can devote to it. Every Clerk and Accountant, to say nothing of other classes who require or may need some knowledge of figures, should acquire it."

thousands now putting their very being into account books. Placing all business upon the CASH system would also prevent the accumulation of those overgrown fortunes so injurious to both rich and poor, by enervating and vitiating the former, and locking up the comforts and even necessities of life from the latter in the coffers of purse-proud capitalists. The credit system requires large profits to cover its "heavy losses," and thus compels good customers to pay up fully the "bad debts" of those who are too indolent, or too visionary, or too unfortunate, or too dishonest to pay their own bills. Paying customers support non-paying as effectually as if the latter were town-paupers; but require "cash on the nail," and men could not get goods till they had first EARNED them. This would check speculation, prevent hard times, promote and even compel industry and frugality, "head off" dishonesty, and cheapen all we buy at least one-third. Men could then do a large business on a small capital, which would increase competition; could turn their money often, which would enable them to sell at a small profit; and effectually DISTRIBUTE property instead of concentrating it; because when a man carries his money in his hand, he can and will buy cheap, and thus keep in his pocket the EXTRA profits required to support the credit system. Hence, as buyers are the masses and sellers the few, this course would keep property diffused instead of concentrating it, as does the credit system. The here's-one-thing-and-there's-another system would almost annihilate both poverty and extravagance; whereas the credit system renders the poor still poorer, and the rich VERY rich, and thus curses both. Men also do by far

463. TOO MUCH BUSINESS.

One Chinese mark of ton or fashion is to wear the finger nails so VERY long that they must also wear them in protect-

His system claims to supersede Algebra—only a kind of short-hand system of arithmetic—altogether, by arriving at required results in a much more summary manner. That doctrine of PROGRESSION already advanced—renders such an improvement quite probable.

ing sheaths. Now all these sheaths are useless, because the nails they protect should be cut off. Hence, all the business done in manufacturing, wholesaleing, transporting, and retailing these sheaths throughout the empire is useless, and should be dispensed with. So of lacing apparatus among us, which is instanced because so much worse than useless. All the business it creates is unnecessary—a misuse of time and human energy. And thus of a thousand other superfluities. "NATURE's wants are few;" but man's purely artificial, and therefore INJURIOUS desires are many, and create most of our business. Dispense with all this EXTRA business, and pay down for the necessities of life, and the amount of human TIME AND LIFE thus saved would be incalculable, and could be turned to a far better account; that is, be so employed as vastly to augment human happiness.

"Oh, but," it is objected, "this destruction of business would throw the poor out of employ, and thus inevitably starve them. These superfluities of the rich are bread and life to the poor." Then pay the poor just as much for doing what is really beneficial in itself, as now for their incessant toil; and give them the surplus time thus saved for INTELLECTUAL and MORAL improvement—those great ends of man's creation. Unless the time thus saved by these cash and curtailing principles, can be converted from this oppressive labor to this or a kindred use—can be rendered subservient to human MENTALITY AND HAPPINESS—its economy is of little account. If men WILL squander their precious time, as well waste it in "keeping books" and this extra business, as any way; but if they would thus save their time and energy, and then expend it in moral and intellectual improvement, how inconceivably more happy they might render themselves! But more of economising time to bestow on mental culture elsewhere.

31. LOCALITY.

464. DEFINITION AND LOCATION.

Cognizance of POSITION : recollection of the LOOKS of places, roads, scenery, POSITION on the page, and LOCATION of objects seen ; that is, of their WHEREABOUTS : the GEOGRAPHICAL faculty : desire to TRAVEL and SEE PLACES, as well as ability to FIND them : the PLACE WHERE faculty : ability to carry the POINTS OF COMPASS in the head, etc.

LOCALITY VERY LARGE. ORDER, CALCULATION, AND SIZE LARGE.



No. 15. CAPT. COOK.

LOCATED over Size and Weight, or about half an inch above the inner third of the eyebrows, and running upwards

and outwards. It is immensely developed in the accompanying engraving of Capt. Cook, the first circumnavigator of our globe. His history bears ample testimony to the extraordinary power and activity of this faculty. This perfect correspondence of its extraordinary vigor with this immense size of his phrenological organ of Locality, bears testimony to the truth of this science ; and the more so because his likeness was taken before Phrenology was known ; yet behold the coincidence between his character and this enormous development of Locality.

465. ADAPTATION AND FUNCTION.

Every material thing must be in some PLACE. Nothing can be without being SOMEWHERE. Nor can one thing be where another is. But for this elementary principle of matter, our houses—every thing—could have had no PLACE—could have been NOWHERE ; that is, could not have been at all. But space both EXISTS, and also forms a NECESSARY constituent or ingredient in matter. This space is doubtless INFINITE. At least, thus far human observation, though carried to innumerable BILLIONS OF MILES, has been unable to find its limits, yet probably has scanned but the merest MOIETY of that boundless extent stretched outward, above, below—everywhere—by its INFINITE CREATOR. Yet with this element in nature, but without its corresponding faculty in man to put him in relation with space, it would be a perfect blank to him, so that he would be unable to find any thing except by accident, and would “lose himself” every time he left one place or thing to find another.

466. LARGE AND SMALL.

LARGE Locality readily recognises places seen before and easily finds them ; seldom gets lost even in the forest, and retraces its path, however winding or intersected ; calls to mind WHERE it saw things ; keeps the points of the compass in the head ; learns and remembers geography with facility ; and easily LOCATES every thing. Small, it loses its way in

the city or woods ; forgets places ; and learns geography with difficulty. It is indispensable in the prosecution of most kinds of business and science.

467. CULTIVATION OF LOCALITY : TRAVELLING.

The ends it subserves are so indispensable, and the advantages of its full development are so great, that its cultivation becomes proportionably important. To augment so invaluable a gift, EXERCISE it. MARK places—all the places you see by the eye—so that you will know them when you see them again. If in the city, note streets and important houses, and when you visit one not seen before, look around at the neighboring ones, and if you can fix upon any distinguishing peculiarity, write it on the tablet of this faculty so that you will know both it and the house in question, when you see them again. If in the country, observe every tree and all the cross-roads ; in short, MARK YOUR TRACK wherever you go, so that you can always retrace your steps. When you read, note the pages on which particular points of interest are stated. Also TRAVEL if able ; and whenever you do, unless you walk, mount the stage-coach or promenade the steamboat deck as they traverse hill and dale, in order to observe the every varying scenery thus presented to the eye. For this, railroads furnish fewer facilities than slower conveyances. If you can snatch a leisure hour in visiting strange places, mount some eminence commanding a prospect of the surrounding country ; or follow a river or shore miles for a similar purpose. To CONTEMPLATE SCENERY, besides feasting Locality, also exerts a highly purifying, elevating, and even RELIGIOUS influence over the mind, and weans from vice to virtue. It is therefore desirable to diminish to their lowest point the expenses and dangers incident to travelling, so that all may enjoy its advantages as well as pleasures. Our nation as a whole out-travels all the world besides ; and the more the better ; for few things equally instruct or benefit. Few equally stimulate that observation already shown to lie at the BASIS of all education⁴⁶⁸, or promote general mental action.

and therefore discipline⁴⁰⁰. Still, to be useful, travelling must be IMPROVED. A dunce may travel a life-time yet learn less from it than an active, penetrating mind will gather in visiting some contiguous city. Nor do many things require more mind than travelling, when all the good it can confer is desired to be obtained.

468. STUDY GEOGRAPHY.

Since we cannot well travel over the whole earth, let us travel by proxy ; that is, study GEOGRAPHY—practically as far as we can, and then by MAPS and books. Though the present method of teaching this science is less defective than that of teaching most other sciences, yet it might be essentially improved. Its modern method of employing maps vastly facilitates its acquisition and retention, yet should be carried much farther. Every important city, river, island, and landscape on earth ought to be accurately engraved, so that looking through a magnifying lens at them, would represent them the size and appearance of life. Impressions of them thus obtained would never be forgotten⁴³¹. This is doubly important in teaching geography to children⁴³⁴. Globes are still more serviceable, and should be constructed large enough to allow cities, rivers, mountains, etc., to be accurately represented by ELEVATIONS AND DEPRESSIONS. Geographical GARDENS should also be constructed on the same plan ; but of these matters hereafter. We wish now to urge strongly the study of NATURAL geography. The study of the artificial boundaries of countries and states is less important than of natural boundaries and landmarks. Take or teach first the grand divisions of the earth into land and water, or the formation of Oceans and Continents. Next its FRAME-WORK. Thus, beginning with Cape Horn, follow the Andes—that chain of mountains whose extension into the sea forms Cape Horn—on up along the western coast of South America to the Isthmus of Darien, which it forms ; then northwest along the Rocky Mountains to Behring's Straits, which it also forms ; then down Kamtschatka which it also originates, through Eastern Asia to

the Himmaleh mountains, that HEAD of the mountainous formation of our globe; and then southeast into its formation of the Polynesian islands; and west through Mount Ararat, the Pyrenees, and rock-bound Gibraltar, to the mountains of the Moon in Northern Africa, and you have the mountainous or bony structure of our globe; especially if you follow the Blue Ridge from its rise in Alabama along the eastern borders of our continent through the Catskill, Green, and White mountains to its northern termination.

Then take up the river basins, and mark the peculiarities of each and all. The Mississippi valley is wide, level, beautiful throughout all its course and branches. The St. Lawrence is full of lakes or marshes, both of which result from the same topographical peculiarity of formation. Accordingly, besides containing the largest bodies of fresh water in the world, it is full all through Wisconsin, Canada, Michigan, and northern New York, of lakes, of which Seneca, Cayuga, Skaneateles, Crooked, Canandaigua, and others, are samples. Nor can we go many miles in any direction throughout this vast valley without intersecting these lakes or marshes.

Mark another peculiarity in the St. Lawrence valley—that which forms Niagara Falls. Some great internal commotion of the earth has, as it were, broken its crust in two, and raised up one side of the breach several hundred feet. This, the only one-sided hill known, commences in Canada West; extends along the northern shore of Lake Ontario; forms Niagara Falls; continues on to Lockport, where the Erie canal in rising it makes some nine or ten successive locks; extends on east to Rochester where it forms Genesee Falls; and continues on to Watertown, which it built up by creating the fall of the Black river at that place. The Oswego river, and each of the other rivers which rise in central New York and flow north into the Ontario, pitch over this same ledge, which creates one or more falls in each, of several hundred feet. Nor are these by any means all the topographical peculiarities of this great northern drain of our continent, yet serve our present illustrative purpose.

But the Susquehanna has a topographical aspect entirely

different. Its bed, from the head waters of all its branches throughout its entire course, is broad and shallow ; and on each side of almost any part of it and its branches will be found terraces or rapid ascents from its bed several feet high, then a level, and then other rises and levels corresponding with each other on both sides. Its waters also run close under the base of its mountains, which often rise rapidly to great heights, and are usually regular. Any one at all acquainted with these topographical aspects of either of these rivers, or of any of their branches, can tell what basin he is in just by these general resemblances, though he is without any other means of knowing.

469. GEOGRAPHY FOR CHILDREN.

In cultivating this faculty in children, begin before they are two years old. Direct their attention to different rooms and their relative locations. Teach them east, west, north, south, right, left, above, below, etc., and often ask them WHERE—in what particular rooms and parts of rooms—the bureau, clock, sofa, and other things, are located. If you live in the country, teach and often ask them the direction of given fields, as the wheat-field, corn-field, meadow, pasture, woods, etc., and where certain people live, etc. If in the city, pursue a similar course by calling special attention to public and singular buildings ; to streets, lanes, and every thing calculated to improve this faculty, as well by teaching and encouraging them to find their way early.

A personal anecdote. Taking his little daughter, three years old, upon his horse before him, despite of its being singular, the Author asked her after a little while, "Which way is mother?" Then turning a street, "Which way is she now?" Coming to a place so peculiar as to be easily remembered, she was requested to look around sharply at the houses, in order to remember them next time. Riding on we came to a parrot, with which she was immensely delighted. At our next ride, on coming to the place she was requested to remember, she recollected it, and was overjoyed with the idea of finding the parrot which she remembered was near. This

time she was told which way to go to find the parrot, and the next time she remembered that also. By pursuing a similar course, this faculty can be easily roused to vigorous action so as through life to note and be able to find the way.

470. THE STUDY OF GEOLOGY

Furnishes a powerful stimulant and therefore discipline of this faculty, in connection with many other intellectual and moral powers. The earth has written her own history upon her surface and her depths, besides teaching some of the grandest lessons we can learn. Every mountain, valley, mine, river, embankment, rock, stone, and even mineral and pebble, **FORCE** upon us the conviction that many and great **CHANGES** have transpired on the earth since its creation, and plainly record the character of those changes. The various layers of earth seen on digging into an embankment—the different strata of rocks and of substances in the same rock, veins in rocks, and shells often found imbedded in them; huge stones lying far above high water mark, yet having been worn smooth; petrifications and tracks of animals imbedded in masses of rocks, and even on the tops of mountains; the skeletons of extinct races of animals, often of astonishing dimensions, found imbedded deep in the earth, and sometimes in solid rock*—these and innumerable kindred phenomena, teach lessons concerning the earth's past history and future destiny—which man can read and should know, and which will yet develop discoveries of incalculable utility and magnitude. These lessons let children and youth be taught. As you walk

* A few years ago, President Hitchcock, of Amherst College, discovered tracks of birds as large as the ostrich in the paving stones of New Haven. Posterity will confer immortal honor on this distinguished devotee of science and gifted expounder of geology and nature, for his eminently successful labors in the cause of universal knowledge. His head evinces true greatness, and talents of the highest order, which he has assiduously cultivated and turned to the very best possible account. He is one in an age. Long and gratefully will **EDWARD HITCHCOCK** be remembered. See his developments as given in the *Amer. Phren. Journal*, for 1846.

or ride past rocks composed of different materials, or an embankment having different strata of pebbles, or clays, or earths, one above another, point them out and explain what is known or supposed of their cause, and thus of other geological phenomena. Whenever practicable, take them into coal and other mines, and into wells before stoned up, and show them salt, sulphur, the Saratoga, and other mineral springs, by way both of practical instruction, but especially of putting them on the **TRACK** of personal observation and reflection. You will thus "sow good seed on good ground," which will take deep "root, and bring forth an hundred fold" of immediate pleasure, as well as of intellectual advancement through life. Get them hammers, and take them with you to quarries and upon mountains in search of minerals, at the same time directing their attention to whatever of interest in the world of trees, vegetables, and flowers you may find; and think you one such scientific ramble will not excite and thereby develop ⁴⁰⁰ their minds more than months of monotonous reading and spelling? Nor will adults find Geology devoid of interest, but on the other hand full of the most thrilling facts and laws. But of this hereafter.

Locality will also find excellent discipline in studying Phrenology, because all the organs require to be **LOCATED** correctly. On retiring from the arduous professional engagements of the day, the Author has often felt this organ as it were nestle, and experienced a prickling sensation, as if it had been over-done. The study of anatomy also disciplines and strengthens this faculty, as does indeed that of most of the sciences. So do voyages and travels, which should be generally perused, yet to combine complete excellence, they equire to be written **PHRENOLOGICALLY**.

471. **ADAPTATION OF THESE FACULTIES TO THE INHERENT PROPERTIES OF MATTER.**

Phrenology, if true, constitutes a part and parcel of **NATURE**, with which, of course, it perfectly harmonises. Its physico-perceptive faculties, therefore, which put man in relation with matter ⁴¹⁵, should of course harmonize perfectly with the

INHERENT properties of matter, by giving an organ for every primary property. And thus it is. Natural philosophy ascribes to matter the following inherent properties: DIVISIBILITY, CONFIGURATION, MAGNITUDE, ATTRACTION, and IMPENETRABILITY: and Phrenology points out a primary mental faculty corresponding with each. Divisibility has its specific mental correspondent in Individuality⁴³⁰. Physical configuration is the exact counterpart of the mental faculty of Form⁴³¹; the two being the precise prototypes of each other. Size has its specific correspondent in magnitude⁴⁴⁰. Gravitation corresponds perfectly with Weight⁴³⁹. Impenetrability—that property of matter which precludes two bodies from occupying the same space—has its perfect similitude in Locality. Behold this most perfect correspondence between human mentality as developed by Phrenology, and the inherent properties of matter as pointed out by natural philosophy! Could the two have been more perfectly adapted to each other if the same Divine Architect had created both with express reference to each other?

But Phrenology goes beyond natural philosophy as now taught. It points out COLOR as a primitive material element, which natural philosophy omits, yet recognises by implication in attempting to teach its laws. Is not color a primary element of matter? Evidently; else how can that have LAWS which does not EXIST? Nor is color merely accidental; for what material thing ever existed wholly colorless? In this respect Phrenology agrees fully with nature, while natural philosophy does not. Method is also a primary property of matter. It appertains to the earth itself—indeed, to all worlds—and to all those individual things of which it is composed, and therefore to UNIVERSAL MATTER. Nature's very disorder is methodical. Though stones lie scattered on and in the earth at random, yet this is their PLACE. If suspended in "mid air," they would be in disorder, but are now AT HOME. And since order appertains even to STONES, of course it does to every thing. All organised bodies observe method⁴⁴¹; and of course ALL THAT IS. Yet natural philosophy, as now interpreted, has overlooked this necessary property, while Phren-

ology recognizes it, in assigning to it a primary mental faculty. So of number. Nothing can be without being one considered alone, or one of many ⁴⁵⁸. This COUNTABLE property of bodies is as much inherent as their configuration or magnitude. This property, our imperfect system of natural philosophy has, however, overlooked, though arithmetic recognises it, while Phrenology discovers a mental faculty adapted to it, and thus shows it to be an INHERENT property of matter. But Phrenology has overlooked no one property of matter, having discovered a specific mental faculty for each and every physical property. Behold this correspondence, and then say whether the Author of nature did not construct Phrenology also in perfect correspondence. This correspondence is the more remarkable because the perceptive faculties were discovered in different centuries and by different men, yet, brought together and analyzed, every perceptive faculty agrees perfectly with some inherent property of matter, and every primary quality of matter finds its perfect correspondent in one of these perceptive faculties. Behold also, how mind is thus put in relation with matter! Mark this feature of the MENTAL PHILOSOPHY of Phrenology.

472. PHILOSOPHY OF THEIR LOCATION.

Observe, moreover, that all these Physico-Perceptives which thus put man in relation with matter, are located OVER THE EYES—those organs with which mainly we hold converse with the external world. It is BY THE EYE, when sight is good, that we take cognizance of the EXISTENCE of bodies—Individuality ⁴⁵⁹; of their CONFIGURATION—Form ⁴⁵⁹; of their BULK—Size ⁴⁵⁹; of their MOMENTUM OF MOTION—Weight ⁴⁶⁰; of their COLOR—Color ⁴⁶⁰; of their ARRANGEMENT—Order ⁴⁶⁰; of their NUMBER, that is, COUNT them—Calculation ⁴⁶⁰; and of their POSITION—Locality ⁴⁶¹; rather than by any of our other senses. True we can take cognizance of them by the other senses; yet, when all the senses are equally perfect, we spontaneously and universally take cognizance of ALL material properties by LOOKING at them. Behold, then, that phrenological coincidence which locates all these organs which, in the performance

of their functions employ the EYE MAINLY, OVER AND AROUND, that eye with which they are thus intimately related ⁴¹⁴. Reader, if Phrenology had been YOUR invention instead of nature's, would you ever have THOUGHT as far as this? Is not here a stroke of phrenological philosophy which stamps it with the impress of DIVINITY?

32. EVENTUALITY.

473. DEFINITION OF LOCATION.

Cognizance and memory of ACTION: love and recollection of FACTS: desire to witness and institute EXPERIMENTS; find out what is; ascertain what HAS been; and see what WILL be: love of ANECDOTES: recollection of CIRCUMSTANCES, NEWS, OCCURRENCES, historical and other EVENTS, past and passing ITEMS of INFORMATION, and general knowledge of what we have DONE, SAID, SEEN, HEARD, and once KNOWN: etc.

EVENTUALITY LARGE.



No. 16. SHERIDAN.



No. 17. CHILD.

Located in the middle of the forehead, directly above Individuality ⁴¹⁹, and between the two lobes of Locality ⁴⁶⁴ though extending somewhat higher up. Its full development fills and rounds out the middle of the forehead as in the accompanying engravings of Sheridan and a child. It is also very large

in Burritt⁴¹⁹ and Michael Angelo⁴¹⁵, but moderate in Franklin⁴¹⁷, as is evinced by that depression in the middle of his forehead. It is large in Pitt, but small in Moore⁴¹⁶. Sometimes, though Eventuality may be large, yet an apparent depression occurs at this point because Locality may be still larger. But when on applying the fingers you find in the middle of this depression a perpendicular ridge not obvious to the eye, because of the integuments, but perceptible to the touch, Eventuality is ACTIVE, and has been recently improved by culture.

474. ADAPTATION.

Nature is one vast theatre of ACTION and CHANGE. Her operations are almost INFINITE in number and variety. Continually are her rivers running, tides ebbing and flowing, seasons going and returning, vegetation sprouting, maturing, or decaying, and all her works, animate and inanimate, passing through perpetual rounds of changes or action. Man too, so far from being exempt from this law of transition, is its most perfect illustration. Instead of being doomed to monotonous sameness and shut out from all change, his heart is always beating, lungs heaving, and whole body acting or resting, receiving new or rejecting old particles, growing or decaying, from the cradle to the grave. His mind, too—in its waking state at least—is continually experiencing a perpetual series of incidents ever varying and wholly innumerable, because their very enumeration would only double their number. Countless historical events have been continually transpiring from the first dawn of human existence until now, widening and varying in the person of every successive individual of our race, and necessitated to increase forever! To have been placed in a ONE-CONDITION state, unchanged by a single occurrence, would have precluded all enjoyment and suffering, because the very EXPERIENCING of them is an event. Even the natural sciences themselves are only methodized OCCURRENCES, being made up of the OPERATIONS AND DOINGS of nature. An unchanging state of things could not be any state at all. Action, motion, change, transition, occurrence, etc., are rendered

necessary by the very CONSTITUTION OF THINGS. Yet unless man were endowed with this or a kindred faculty to enable him to EXPERIENCE AND REMEMBER these changes, nature would have been a sealed book to him; all memory of the past—of even of his own past existence—obliterated; experience, his main guide and teacher, unknown; and all enjoyment and suffering impossible. To this element of ACTION in nature, Eventuality is adapted and adapts man by enabling him to take cognizance of and remember this action. Without this mental faculty we could recollect nothing past, and hence should lose knowledge as fast as we gained it, and thus be unable to advance a single step either in the acquisition of that EXPERIMENTAL knowledge so indispensable in all we say and do, or in that INDUCTIVE reasoning which constitutes our main guide to correct conclusions. The very constitution of the human mind requires Individuality to see, and Eventuality to remember, before reason can draw any conclusive inference⁴²⁹. Reason without them is an eye in total darkness. Inferences not founded on facts and drawn from a summary of them are only surmises—are worse than valueless because they mislead.

475. LARGE AND SMALL.

LARGE Eventuality remembers distinctly and certainly all the FACTS—personal, historical, scientific, miscellaneous, etc., which come to its cognizance; desires to learn more; stores the mind with that MATTER-OF-FACT knowledge which constitutes its main body, and furnishes the principal data of reason.

SMALL Eventuality is forgetful; omits to say and do many things designed and wanted; forgets much it once knew; remembers events indistinctly; cannot readily recall even what it knows; and retains only a general idea of the past and of former acquisitions, instead of that DETAILED and SPECIFIC recollection given by large Eventuality.

476. IMPROVING MEMORY BY ITS EXERCISE.

Since the functions of few, if any, of the intellectual faculties are equally useful in all we say and do, its cultivation

becomes MOST IMPORTANT. By what MEANS, then, can it be effected? BY PROMOTING ITS ACTION. Keep it EMPLOYED IN REMEMBERING; because the more you try to remember facts, the more easily will you be able to recall them. The more you CHARGE this faculty, the more tenaciously will it RETAIN its trusts. The idea that TAXING memory confuses and weakens, is erroneous. The very reverse is true⁴⁰, except when body and brain are already exhausted. Ask post-office and other clerks, as well as business men generally, whether IMPRESSING on their minds facts, transactions, changes ordered, names, faces, amounts, and business matters generally, does not greatly STRENGTHEN instead of weaken their remembering capability?

477. THE POWER OF MEMORY ILLIMITABLE.

FACTS compel the Author to believe that the powers of the memory are bounded only by the extent of its CULTIVATION. Of the extent of its natural capabilities, he has the highest ideas. Indeed, he regards its powers as almost infinite. Innumerable facts tending to establish this conclusion, he has witnessed and experienced. On requesting the South Boston omnibus drivers to do errands in Boston, he observed that they took no memoranda, yet committed no errors, though they often do a score of errands at a trip. The second time I went to the Boston post-office, the delivering clerk, without looking over the letters or papers, said there was none for me. I requested him to look, which he did, meanwhile remarking that it was useless, but found none; and scores of times, the moment he saw me, responded that there was something or nothing for me, without my being able to detect a single mistake. To be able thus to remember whether or not there was something for any of those thousands of citizens and strangers continually applying, requires an extraordinarily retentive memory; and yet every reader might have attained, probably can yet acquire, one quite as efficient. Mr. Worthen, baker, Manchester, N. H., serves three hundred customers, about two-thirds of whom take more or less every morning; but he sets down nothing till he returns home, after having visited

say half of them; yet he forgets not a loaf. A man in Halifax, N. S., can tell at once the name and age of every inhabitant in town, young and old. After delivering a lecture at Clinton Hall, on the improvement of the memory, one of the audience stated that an acquaintance of his, a cattle drover of New York, who could neither read nor write, after having sold out large droves to different butchers, kept their number, price, and every thing IN HIS MIND, and could go around months afterwards, even after having bought up and sold out several other droves, and SETTLE FROM MEMORY, without ever having been known to forget any thing. Those who think this too marvellous for belief, will find it abundantly confirmed by converging and collateral evidence throughout this work. The Gaboon merchants accomplish by memory what is still more extraordinary⁴⁰⁰. The fact is remarkable in itself, and furnishes a practical proof of the correctness of this doctrine of improving memory illimitably by its exercise, that all those who can neither read nor write have astonishing memories—several hundred per cent. better than others⁴⁰¹. Of this fact, any reader can easily find illustrative examples. The reason is that such, unable to RECORD their business transactions, are compelled to REMEMBER them, and thus strengthen this faculty. Indubitable and universal FACT compels the belief that the human mind is constituted and capacitated, provided the body were kept in the right state¹⁵, ⁴⁰², and this faculty disciplined in the best manner, to recal EVERY EVENT OF LIFE. Nature has created memory FACT TIGHT, so that it need allow literally NOTHING to escape, but could recall every ITEM committed to its charge. Behold how astonishingly retentive the memories of children, even though their bodies are yet weak, and their brain necessarily very immature.

What, then, might not the memories of ADULTS become if duly disciplined? As much more minute and tenacious as their cerebral energy is capable of becoming more powerful as they grow older. PROGRESSION, not decline, is nature's ordinance—especially MENTAL progression. I am warranted and compelled by an array of converging FACTS, of which those in this work are samples merely, to regard the constitutional

capabilities of memory to be literally illimitable ; for, if even all "THESE things can be done in the green tree, what cannot be done in the dry ?" If by mere ACCIDENT it is capable of performing all which these facts attest, how incalculably more retentive could it be rendered by applying mental SCIENCE, that is, Phrenology aided by Physiology^{16 411}, to its improvement ? In another life we shall remember even all the slightest CIRCUMSTANCES of this ; nor need we wait till then for this power. Our Creator has done all that even a GOD COULD do to render human memory PERFECT. It is perfect by nature, and to become so in fact requires only PRACTICE—that very EXERCISE which both our own happiness and all we say and do require and almost COMPEL. Reader, within your own reach hangs this most exalted blessing, requiring only EFFORT to pluck it. But modern education and general mental IDLENESS, instead of improving memory actually WEAKEN it ; first by impairing the energy of both body and brain^{16, 408}, by confinement and bad air, and then by giving it so little FOOD as to enfeeble it by sheer starvation. We give it so little to do that it neglects this little, in accordance with the law of things, that "from him that hath not shall be taken away even that he hath."

478. M'GUIGAN'S EXPERIENCE.

This doctrine that the power of memory is illimitable, if fully developed by culture, finds strong confirmation in the experience of Mr. McGuigan, of Milton, Pa. In examining his head publicly, in 1836, I found a large intellectual lobe, and well remember both the bold prominences of his finely-developed Causality, and that perpendicular ridge which indicates the CULTIVATION of Eventuality⁴⁷³. In 1839, at Chambersburg, after having heard me urge the doctrines of this work in a public lecture, he requested an interview for the purpose of enabling me to enforce them still more effectually by narrating his experience ; adding, that his strongest desire was to induce young people to CULTIVATE THEIR MEMORIES. His experience was as follows. At twenty-five, his memory was most miserable. When he went from his tailoring-shop

to his house for things, he usually forgot what he wanted ; or if he went to town did not remember his intended business, errands, etc. He could recollect little that he heard or read, whether names, dates, words, or facts, till he finally became thoroughly vexed with himself for his forgetfulness, and resolved to DISCIPLINE his memory. In order to do this, he repeatedly THOUGHT OVER what he intended to do, or wanted. He read carefully a page of Xenophon's Life of Cyrus, and then RECALLED TO MIND all it contained till he could remember it perfectly—that is, EXERCISED Eventuality. Then reading another page, he thought over all the incidents mentioned in both, and so on, till his memory was sufficiently improved to pursue a similar course in regard to two or more books at once. He strengthened his memory of names by pursuing a similar course—that is, by RECOLLECTING them in connection also with the history of those named. From being obliged to mark where he left off, he charged his MEMORY with it, and soon found this kind of memory similarly improved. He also kept Causality busy in PHILOSOPHIZING on what he read—(thus adopting the very method to improve these faculties which Phrenology recommends, namely HABITUAL EXERCISE.) The result is, that he has the most retentive memory, and is the best-informed man in central Pennsylvania. Lawyers apply to him for legal knowledge, and doctors for medical, and the literati of all that region resort to him to obtain information on doubtful points, besides deeming it a great privilege to gather from his conversation that information which his diversified and extensive reading and retentive memory enable him to impart. "Go and do likewise," ye who have poor memories, because your's are as susceptible of improvement, and doubtless to as great a degree as his. He says that now, though sixty years old, his memory still grows BETTER AND BETTER, and mind improves, though at his age both usually decline. Burritt's most extraordinary fund of knowledge—that of over fifty languages included—shows what the human mind is capable both of acquiring and retaining. His hereditary memory was undoubtedly great, yet McGuigan's was not; so that even if Burritt's case does not prove that all can

be Burritt's, McGuigan's goes far to prove that all can become McGuigan's. ALL children have retentive memories; therefore nature does HER part towards conferring on adults still better⁴⁷, if they would but PERFECT BY CULTURE what they INHERIT BY NATURE. Reader, just try this experiment thoroughly and perseveringly, and hold Phrenology responsible for its successful issue.

479. THE AUTHOR'S EXPERIENCE.

My professional practice has literally compelled me to exercise memory, and thus greatly strengthen it. In making out written delineations of character, where companies were examined, or several individuals in succession, being obliged to postpone writing perhaps for days, and till scores had been examined, I meanwhile CHARGED memory with the size of the organs of all examined, as well as with what I said of them till I could find time to write. If I took memoranda I did not refer to them till I had written all I remembered first, and seldom had occasion to make additions. Unless I charged my mind with examinations, they passed from it as those examined left the room, except they were remarkable, or unless my brain was exhausted. To say that this course has doubled my retentiveness several times over, is speaking within bounds. Of circumstances which occurred previously to this discipline, my memory is indistinct; but even trifling circumstances which have occurred since, as visits to particular places and families, conversations, and the like, rarely escape me. Memory of names is still poor, because less disciplined by EXERCISE. In visiting families—and I often have appointments every evening for weeks beforehand—I never once think of writing down time, street, place, or number, nor ever forget them. Following out this principle, I never either lecture from notes or commit, yet am literally crowded with facts and thoughts. "Phrenology Proved," with its thousands of combinations and reports of examinations, was composed, not from *notes*, but from RECOLLECTIONS, from which also, I could fill volume after volume without departing in the least from FACTS just as they transpired. Nor would the gold

of the WORLD buy back, if that were possible, the mere IMPROVEMENT thus effected, unless I could reinstate it by a similar course. Nor shall additional efforts be wanting to perfect it still further. This personal narrative is not prompted by a boastful spirit, because no credit is due for having done what business absolutely compelled, but by a desire to lay before the reader another sample from life, for his encouragement and practical direction.

The study of Phrenology furnishes the best possible stimulus of mind, and is therefore cordially recommended both on account of its unfolding the most glorious truths and the richest mines of thought, and as the best known means of IMPROVING MEMORY and STRENGTHENING INTELLECT. But of this hereafter.

This great doctrine of improving the memory by exercise might be sustained and enforced by almost any number and variety of converging facts, and additional encouragement afforded to all who would attain so useful and glorious an acquisition; but is not this amply sufficient both to prove that the powers of memory are literally illimitable, and to encourage ALL, especially YOUTH, to prosecute this mental culture vigorously and perseveringly? These directions are easily put in practice, and their results sure and invaluable. ALL, however poor or laborious, can EXERCISE MEMORY. This can be done "without money and without price," and even while actually prosecuting any of our daily avocations. Indeed, so far from intercepting, it facilitates them all. Even our business transactions themselves furnish perpetual mental discipline. The course here pointed out will actually FACILITATE business in and by the very act of cultivating memory.

480. RECALLING THE PAST

Also furnishes a most excellent discipline of memory. As you retire to rest, spend a few minutes in recalling the events, sayings, doings, etc., of each day. Recall what you did and what occurred when you rose, before, at, and after breakfast, dinner, and supper; what you have said, heard, read, and done through the day—your sales if in business, or meditations if a laborer, and every transaction of the day. Extend

this review every Saturday through the past week, and every new year's through the past year. Also frequently recall the events of childhood, youth, and life thus far. This course was pointed out in former editions of this work, and has been pursued by thousands, every one of whom, as far as heard from, has realized from it much more than they expected, many saying that NOTHING would tempt them to part with the augmentation of memory and intellect thus attained.

After the first edition of this work was printed, the Author, in a familiar stroll with a sister, not unknown to his readers, remarked that he had urged this review of the past with emphasis, and that he considered it all-important and invaluable. She answered that she had pursued this course ever since she came to reside with him—that along at first she wrote down every night, in a diary, the occurrences of the day ; that sometimes, when especially occupied or fatigued, she would think over and CHARGE her mind with facts intended for writing till the next day or evening. After a while she could thus bear in mind her proposed records for two, three, four, and finally seven days, more easily than a single one at the first. Meanwhile her memory had become so improved, that although Eventuality was naturally small, yet its retentiveness had rendered her a standing reference. The Author had before observed that her memory PERFORMED remarkably well, though her organ of Eventuality was only moderate. This apparent contradiction its habitual EXERCISE satisfactorily explained. Even small Eventuality, thus DISCIPLINED, will ACCOMPLISH many times more than large Eventuality allowed to become rusty by inaction. Mark this ye who complain of treacherous memories.

This review of the past will also show us our errors, and greatly aid in their correction—will give us a just estimate of our sayings, doings, faults, and entire character and conduct ; and though it may extort a tear of penitence for our imperfections and sins, yet will be found the most effectual instrument of self-control and MORAL as well as intellectual improvement we can employ ; because the pain occasioned by contemplating our errors, and the pleasure of reflecting on

our good conduct, will instinctively lead us to avoid the former and practise the latter'. Does not this whole subject commend itself to the common sense of every reader, at least enough to warrant its full trial?

481. RENDERING RECOLLECTIONS PLEASURABLE.

How ALL IMPORTANT, then, that we render all our recollections of the past AGREEABLE. Since to recall them, thus strengthens memory and improves morals, it should be rendered sufficiently inviting to induce its frequent repetition. Memory enables us to RE-ENJOY the pleasures and re-suffer the pains of life over and over thousands of times. How a single wrong act which leaves a moral stain upon the disk of memory, pierces us with new pangs every time it flashes across our minds, while every recollection of the good and the PLEASURABLE in word and deed sheds on us a bright beam of happiness well nigh equal to that experienced in the act itself—thus enabling us to redouble our pleasures illimitably! How immensely important, then, that all our recollections should be pleasurable, and all our conduct such as to renew our delight every time we reflect upon the past? O youth! be entreated to do NOTHING which will not bear REVISION. Bear always in mind that the consequences of conduct do not cease—only begin—with the conduct itself! And let childhood be rendered as happy as may be, and our whole lifetime be filled with virtuous pleasures', so as to facilitate and induce that revision and its consequent moral and intellectual improvement here urged.

482. TELLING CHILDREN STORIES.

Active Eventuality being thus invaluable, its cultivation in CHILDREN becomes also most important. How then shall it be called into early and vigorous exercise? By telling them STORIES, and showing them the operations of nature FIRST, and teaching them to read afterwards. How exceedingly fond all children are of stories and facts? What child—almost infant—as it opens its eyes with the dawn, has not begged "Mother please tell me a story:" "Please mother do tell some

stories," more eagerly than they beg for bread? What child cannot be stopped from crying, or coaxed to bed, or to do things, by the promise of being told **STORIES**, if only "Mother Goose's," sooner than by almost any other means? Yet how often are they impatiently rebuked by "O do hush up! I've told you all the stories I know"—a score perhaps. The Bible, to say nothing for or against its authenticity, is full of common sense and human nature. It enforces our story-telling doctrine in its requiring the children of Israel to tell their children the Lord's dealings with their nation "by the way-side and by the fire-side, when you lie down and when you rise up," and to "write them over their doors," "that they may be a perpetual token of remembrance"—thus making it a religious **DUTY** to tell their children, grandchildren, and great-grand-children throughout all their generations, stories of their forefathers' sojourn in Egypt, departure, wanderings, rebellions, and their entire national and family history. The tenacious adherence of the Jews to their "scriptures," renders it well nigh certain that this injunction has ever been and still is scrupulously observed, and accordingly, **Eventuality** is surprisingly large in them—larger than in probably any other class of people. Corresponding with this is the fact that our best historical and oriental scholars are Jews. What history equals that of Josephus for accurate minuteness, or the Old Testament as an historical composition merely?

The Indian tribes also have remarkably retentive memories, and accordingly even perpetuate their **HISTORIES** by telling them to their children. The aged grandfather, too feeble longer to chase the stag or wield the tomahawk, taking his grandson on his knee, recounts with a minuteness and accuracy unknown to us, both the traditionary history of his tribe, together with his own autobiography—the battles he has fought; the enemies scalped, and how he killed them; his journeyings, with all their trifling circumstances, even to the seeing of a deer, or the flying of an owl. He describes particularly the aspect of the country traversed—its mountains, rivers, and plains, together with all their various objects and appearances.

Blackhawk's narrative of his tribe and himself,* published soon after his first visit to this country, though dictated after he was seventy years old, commences with the residence of his tribe in Montreal; relates those prophetic revelations which foretold their removal; describes all the incidents connected with their successive journeys, caused by the whites driving them back farther and still farther; tells the particulars of his joining Tecumseh, going to Canada, fighting against Harrison, defeat, and return; gives the details of the war in which he was taken captive; the aggressions and impositions of the whites; his travels through the states; whom he saw; what transpired and was said on particular occasions; and much more to the same effect, with a precision and minuteness rarely if ever found in our own race. The Indians know even more of their national history WITHOUT books, than we do of ours with; because they tell theirs to their children in the form of stories, while we teach ours to read, and then put our histories in libraries to moulder unused. But UNITE these methods, and the attainments of our children would be almost incredible, far exceeding any thing now known. Do we not remember the stories and incidents of childhood with a minuteness and precision altogether surpassing that of riper years? But WHY this decline of MEMORY, when it might and should IMPROVE? Because our present educational system prevents its EXERCISE, and thus induces that inaction which weakens, and NOT because its decline is necessary—because, in short, memory is literally STARVED for something to recollect; there being little to excite it in school or at home. An illustrative anecdote. A teacher, taking a little girl on his knee, asked her if she went to school. Answered affirmatively. He again inquired what she did at school. She replied, I

483. "SET ON A BENCH AND SAY A."

Children three years old are required to "sit on a bench," and sit STILL too, and to say A, B, and spell ab, eb, ib, ob, ub,

* Reviewed, in connection with his developments, in Vol. I, No. 2. of the American Phrenological Journal, by the Author.

or "baker," "brier," which they finally learn to do by **ROTE**⁴⁸, just as the parrot says "Pretty Polly," and with as little benefit. The confinement and vitiated atmosphere of school-rooms do children vastly more harm than saying A does them good. Swinging up their arms six hours daily for years, will render them also as feeble as the memories of adults usually become, and by precisely similar means—**INACTION**. The plain fact is, that children never should be sent to school to learn to read or spell, because the school necessarily injures their health, and because mothers can teach them much **FASTER AND BETTER** at home. At school, they are called up to read only two or three times per day, and yet are compelled to sit six long hours just to do what can be done at home far more effectually and without injuring them. Moreover, they take no **INTEREST** in their studies, or in the other recitations, any more than if in Greek, and therefore derive no benefit⁴⁹, whereas stories and explanations literally **ELECTRIFY** them with delight, and of course proportionally strengthen intellect.

484. SHOWING CHILDREN EXPERIMENTS.

This principle directs that we show them **EXPERIMENTS**, chemical, philosophical—of all kinds. "What!" objects one, "teach them chemistry, natural history, philosophy, and science generally, before they can read? This doctrine is strange as well as new." But what says their **NATURE**? Can they not **SEE AND REMEMBER**—that is, exercise Individuality, and Eventuality, long before they are old enough to read? Then why postpone education thus long? Our course recommends beginning to educate them even much earlier than now. Before they are three years old they can both remember stories and explanations, and be taught the whole process of vegetation, from the deposit of the seed in the earth all along up through its swelling, taking root, sprouting, growing, budding, blossoming, and producing seed like that from which it sprung. And what if, in learning these and other intensely interesting operations of nature, they destroy now and then a valuable stalk or flower, will not the instruction and pleasure

gained repay a thousand fold? Show them how acorns produce oaks, peach and cherry pits peach and cherry trees, which reproduce other peaches and cherries, and thus of all the ever-changing operations of nature. Put vinegar into water, and stirring in ashes or pearlash, mark their delight at seeing the mixture foam, and explain the cause. Tell them how pearlash is made by draining water through ashes, which makes lye, and which, boiled down, becomes potash, by refining which pearlash is obtained. Ask them what they have seen or learned to-day, and when they tell one thing, ask for another, and then another, thus teaching them to particularize. Or tell them a story to-day, and to-morrow, or next week, ask them to tell it to you. Encourage the elder children to instruct the younger; and let the aged grandfather describe the habits and customs of men when he was young; recount his history; tell them stories from the Bible, or about Washington, the Revolution, England, Greece, Rome, and other things, till their minds are well stored with a knowledge of both nature and history. By these and kindred means their minds can be started early in the love and pursuit of knowledge long before they can begin to acquire this mental cultivation from books. It is now submitted to the tribunal of common sense and mental philosophy, as well as to universal experience, whether this course is not INFINITELY superior to the present educational method?—whether the present system does not, by rendering it inactive, even TRAMMEL mind, instead of developing it by exercise?—whether this does not cause and account for the miserably defective memories of most adults; that is, for the DECLINE of memory, instead of its improvement, as we grow older?—whether this proposed method is not in perfect accordance with the LAWS OF MIND, especially juvenile? Then let them forthwith be adopted. But more in reference to this general subject of the training of mind, both juvenile and adult, after we have analyzed all the intellectual faculties.

33. TIME.

485. DEFINITION AND LOCATION.

Cognizance and recollection of WHEN things occurred—of DURATION, SUCCESSION, the LAPSE of TIME, of DATES, and the LENGTH of time between one event and another: disposition and ability to keep the BEAT in music and dancing and the STEP in walking; to tell WHEN things occurred; carry the time of day IN THE HEAD; etc. LOCATED half an inch above Order and outwardly of Locality, in the middle range of organs.

486. ADAPTATION AND FUNCTION.

The PAST, PRESENT, and FUTURE appertain to all things. Events necessarily occur BEFORE or AFTER each other. Even life itself is composed of one continuous chain of SUCCESSIVE doings and events. From birth through infancy, youth, maturity, and old age to death itself, every year, day, hour, second, and item of existence PRECEDES its successor and FOLLOWS its predecessor in point of time. Instead of being placed in the midst of one monotonous NOW, man exists in the present, and looks back upon the past, and forward to the future. But for this constitutional arrangement in nature, all doings and mental exercises which relate to the past and future would have been annihilated, and all conception of any other period than the present—than one unchanging monotony—obliterated, and therewith the existence of years, seasons, months, days, hours, seconds, and every thing appertaining to infancy, childhood, adolescence, middle and old age, time, and eternity, been extinct to man; which would effectually have broken up the present order of things. Or with this arrangement in nature but without this faculty in man, though this system of periodicity would have existed, and times and seasons have succeeded each other, yet such existence, together with all conception of the past and the future, would have been as utterly inconceivable to man as the beautifully blended colors of the rainbow are to the blind, or exquisite music to the deaf. But with this institution of time

in the nature of things, and this faculty in man adapted to it, we are put in relation with all time, and even eternity ; can hold converse with what has been and will be for thousands of years each way ; can enjoy the present and divide and subdivide the past and future to our liking ; appoint particular times for specified transactions, and tell when they arrive ; and have a time for every thing and all things in their season.

This arrangement of periodicity appertains not to man merely, but also to UNIVERSAL NATURE. It bids the sun, moon, and stars rise and set at the prescribed minute. It ushers the seasons in and out periodically and in their order. It matures grains, fruits, all the productions of the earth, in their respective seasons. It renders all nature one vast but perfect self-time-keeper. It relates infancy and every other period of life to each other by one continuous succession, and all to its final termination in immortality ! Its duration, both past and present, is indeed INFINITE. To it, thousands of ages are but a day. Multiply every atom of creation by TRILLIONS OF ERAS, and you only begin to recount its past duration or future continuance ! Eternity alone can measure it ! And the existence of this faculty in man adapts and guaranties his existence throughout its illimitable range ! Yes, man is indeed IMMORTAL !

437. LARGE AND SMALL.

LARGE Time keeps the time of the day, week, year, etc., in the HEAD ; notes and remembers WHEN things occurred, and in narrating them gives their DATES ; keeps the beat in music, and is tormented when it is not kept ; preserves the step in walking, and walks in pain with those who break it ; recollects what events transpired before, and what after each other, or the order of their occurrence ; has or desires a time for every thing, and all things IN their seasons ; wishes to eat, retire, rise, etc., at appropriate hours, and notes and recollects whatever appertains to times and seasons, such as dates, appointments, chronology, and the like, easily and correctly. SMALL Time occasions forgetfulness in these and kindred respects, and remembers them imperfectly and with difficulty as

far as it does at all; often fails to notice that appointed times have come, or excuses itself with "I did not think it was so late;" and is less particular to time habits and doings. It however requires less Time to keep short intervals of time, as in music, dancing, and walking, than to bear the time of day or night in MIND.

488. IMPORTANCE OF PERIODICITY.

"There is a TIME for all things," and all things should transpire in their season. Is it not important that the sun, moon, and stars rise and set to their appointed second? What confusion would their irregularity cause throughout even the universe? Does nature regulate her operation by keeping the most PERFECT time, and shall not man, the highest of her works, also observe a corresponding periodicity? Was this institution created in vain, or man adapted to it for nought? If nature without timeing her operations, would be rendered so imperfect as to be valueless, shall man mar his nature and blast his happiness by not observing times and seasons? And since periodicity in her is so incalculably beneficial in all her operations, shall not man also follow her teachings by observing that regularity of which she sets so perfect a pattern? Indeed, she COMPELS such observance in part; and the more perfectly he times himself by nature's clockwork, the more effectually will he secure his own happiness by observing her laws⁵. But in failing to observe her times and seasons, he violates her laws and incurs their penalties⁶. How plainly she teaches and how rigidly enforces having a time for every thing, and doing all things in their allotted seasons? Does she teach the importance or enforce the necessity even of eating more effectually? Time was created to be exercised as much as Alimentiveness. We neglect both at an equal peril. All our happiness consists in EXERCISING OUR FACULTIES. Hence, to omit such exercise is to curtail such enjoyment—is even to violate nature's DEMAND for their exercise, and therefore to substitute sin for obedience and suffering for pleasure⁶. The more perfectly, therefore, we observe her institution and requisition for PERIODICITY, the more virtuous and happy we shall

thereby become Irregularity is WRONG, because it induces suffering⁶.

489. OBSERVANCE OF PERIODICITY.

Let us all, then, follow this teaching and requisition of nature. Let us APPROPRIATE OR LAY OUT all our time, and then adhere strictly to such appropriations. Let us appoint a specified time to rise, breakfast, dine, sup, study, transact business, and even particular kinds, recreate, retire, and prosecute every avocation of life. Than this, few things are more promotive of health, happiness, and even life itself; for where is the aged person whose habits are not regular, or what tends to prolong life more than regularity of habits? How incalculably more, also, we can accomplish as well as enjoy by pursuing this regularity? Have no set time for any thing, and what loss of time, derangement of affairs, and perpetual confusion ensue? But how appointing particular times in which to do particular things, facilitates dispatch, and institutes perfect clockwork throughout all the habits and operations of life?

Since this periodicity is thus important in eating, sleeping, business, and the like, is it not as much more so when applied to the higher faculties as their functions are more exalted? Should we not, then, set apart particular TIMES for the exercise of intellect and moral sentiment, and even for each one of these higher faculties? And these seasons ought to be DAILY. In fact, no day should be allowed to pass without our improving certain portions of it in cultivating these god-like powers. Indeed, these noblest functions of our nature should take PRIORITY in occupying our time. We should appropriate certain hours daily to reading, reflection, the cultivation of memory, and, above all, to the worship of God. Nor hours in the day merely, but days in the week and year. The observance of religious sabbaths, festivals, fasts, and ceremonies, not only coincides with the nature of man, but is absolutely necessary to perfect that nature.

490. FORMING PERIODICAL HABITS IN CHILDREN.

Since regularity of personal and business habits is so indispensable in adults, its early formation in children is equally important. Begin in the very cradle. Put them to bed at particular hours, and they will soon fall asleep spontaneously when their time arrives, and also awaken at just such times every day. Feed them regularly and they will never tease for nor require food between meals, indulgence in which is decidedly injurious.—And thus of every thing else. The power and utility of habits thus formed, are incalculable. Even indifferent habits well followed become beneficial. How much more, then, those that are good IN THEMSELVES? Mothers, by as much as you love your children—by as much as you desire their prosperity and even life—mark and follow this direction. It will even save you a vast amount of time and trouble, as it will them of ill-temper and even temptation to sin. You are not permitted to confer many equally great blessings on them. Better form one good habit in a child than leave it a legacy of millions. That child who has been trained up to regularity is richer than Solomon and Cræsus together. But poor indeed is that youth, however large his property, who has no such fixed periodicity of habits. Liable even to become vicious, which well-established habits, especially of retiring, would prevent. In short, few things in the training of children are equally important, or even in perfecting our own characters as adults. Do not these remarks commend themselves to the experience and the common sense of all who have either? Will not all commence their vigorous practice FORTHWITH, and continue it through life?

491. CULTIVATION OF TIME.

All these and many kindred advantages are the natural products of Time, when its function is vigorous and rightly exercised. Then how incalculably important its assiduous cultivation? To strengthen this invaluable power, EXERCISE it ⁴⁰⁰. This can be effected, not by relying upon your time-piece for the hour, but on your HEAD. Bear in mind the time

of day, and the day of the week and month. Often pass judgment on the time of day, and keep in mind HOW LONG certain events transpired before or after others. In reading history, impress strongly on the mind the era and order of succession of events recorded. Compare dates, and associate together those events which transpired about the same time. Keep the step in walking and dancing, and the beat in music. Give yourself a certain number of minutes or hours in which to do given things, and note how long you are in doing them. Be punctual in fulfilling all appointments. Above all, set apart particular times for particular things, and mind and keep the appropriations⁴⁹⁰. In short, TIME every thing, yourself included.

492. THE EXTENT

To which Time is capable of being strengthened by these and kindred means, is truly astonishing—far greater than is supposed. The experienced nurse, having first charged this faculty to awaken her in half an hour, or in just one or two hours, as the doctor may have ordered, throws herself upon her couch, and sleeps soundly ; this watching sentinel meanwhile counting off the minutes and hours till the specified time arrives, when it sounds the alarm, and wakes up the other faculties. Many an elderly farmer, unblessed (?) while young with artificial time-keepers, can sleep soundly till the time previously appointed for rising arrives, and always waken within a few minutes of the time set. Many elderly people, habituated to rising at a particular hour, awaken regularly, even when they have been previously broken of their rest. All might and should habituate themselves to these and similar practices, which will soon become second nature, and incalculably serviceable through life. And it is really surprising how soon and easily the system habituates itself to regularity in all things. Magnetized patients, when required to awaken at any specified time, do so almost to a second, and can tell and measure time with an accuracy incomparably greater than any in the natural state.

Yet how little is Time cultivated from the cradle to the grave? Few take ANY pains to strengthen it by exercise, but live in perpetual violation of its requisitions; and hence its almost universal deficiency in the American head. In probably no other national head is it equally small. Yet this need not and should not be, and would not, if duly cultivated in both early and mature life. One great cause is our almost universal but

493. PERNICIOUS RELIANCE ON TIME-KEEPERS,

To the exclusion and consequent enfeebling of that MENTAL chronometer thus bountifully furnished to man. It is perfectly obvious that this reliance on the former tends to diminish the action, and consequently the power of the latter. If most artificial time-keepers were destroyed, and few others made, men would be compelled to exercise, and thus develop this important faculty till it could keep time correctly; but by carrying the time in our pockets we give this faculty nothing to do, and it of course does nothing. It thus becomes feeble from mere inaction, and this abridges the pleasure adapted to flow from its full development and vigorous exercise, besides seriously impairing the efficiency and the enjoyments of all the other faculties. This mental chronometer could be so disciplined as to keep the time in the head quite as correctly as clocks and watches now do; would always admonish us of the arrival of appointments and particular periods; and improve the entire mind and body in ways innumerable, which artificial time-keepers can never effect; whereas now, NATURE'S chronometers being laid aside to become rusty, we forget to look at those of art, or perhaps they are "not right," so that appointed times pass unheeded, and the advantages of regularity⁴⁹⁸ are not secured. Nature always excels art. Art may be advantageously employed to aid nature, and work with and under her, but should never supersede her. We may usefully employ clocks and watches TO HELP our mental time-keeper, just as we do arithmetic to aid Calculation⁴⁹¹, or books to help Language, or notes to assist music, or maps to facilitate geography, or logic to aid

reason, but never to TAKE ITS PLACE. It should be the main reliance, they only casual assistants. When, but ONLY when, art can transcend nature, and human invention exceed and advantageously SUPERSEDE Divine, may clocks and watches be profitably employed in place of NATURE's chronometer! Preposterous! This superseding by human mechanism that LIVING time-keeper created by God and bestowed freely on man, must necessarily eventuate in evil—must cripple this important mental power, and thereby impair the entire mind. To avoid this deterioration, DISCIPLINE this faculty by keeping time in the head.

While, however, these doctrines and recommendations are perfectly true and very important, yet they are also modified by circumstances. We sometimes require to and do become so thoroughly engrossed as to be unconscious of the lapse of time. Yet we then rarely require time-pieces, at least not till we are through with the matter in hand. This one-idea state—this being completely absorbed to the exclusion of every thing else—is the product of a high order of mental discipline, and should by all means be encouraged. Still, neither these nor any other qualifying remarks invalidate our general direction to carry the time IN THE MIND instead of the pocket. But to

494. EMPLOY ALL OUR TIME

Still more effectually secures the advantages designed to be conferred with and by this faculty. "Time is money." Time is happiness. Time is LIFE itself. Time is indeed the groundwork of every thing; for what can we do, become, enjoy, except by IMPROVING OUR TIME? Is it not, then, too precious to be squandered or misapplied? Should we allow even a single hour or minute to pass unimproved? If we do, we experience an irreparable loss! Time once passed never returns! We have but one life to live, and can live its every year, day, and hour BUT ONCE. A given hour allowed to pass unimproved, an opportunity for ENJOYMENT has flown forever! We can improve time only WHILE IT IS PASSING. Indeed, the right improvement of time is only another name for every

virtue and for perfect happiness ; its misimprovement for every sin and wo. "An idle head is Satan's workshop." Yes, IDLENESS is the prolific parent of vice, the great clog to progression, and the canker worm of enjoyment. Though the slothful may live and breathe, yet they can EFFECT AND ENJOY little, and therefore LIVE but little in a month, or year, or lifetime, compared with those who are always DOING. Not that we should never recreate. Taking relaxation when the system requires it, only re-loads it with energy preparatory to renewed effort, and thus becomes more profitable as well as pleasurable than continued labor, which weakens by fatigue. But recreation is not laziness. It both renders happy for the time being, and also prepares both mind and body for renewed action and enjoyment, and therefore, when required, doubly fulfils the great end of life¹. But to sit down and do nothing for half an hour at breakfast or supper, or an hour at dinner, or perhaps allow the morning and evening to pass unoccupied, soon squanders weeks and years irreparably, which, rightly improved, might have contributed largely to our present and future happiness, and that of our fellow men. To waste time in bed not required for sleep is especially pernicious ; because often the author of impure thoughts and feelings, which lead to sinful conduct. To keep perpetually DOING good to ourselves and others, precludes vice and secures virtue. This is our SOLEMN DUTY, because the great instrumentality of all enjoyment—the "chief end" of our creation¹. We are placed on earth to BE HAPPY, and to do this we must improve our time. The HAPPINESS experienced in doing every duty is the great bond and origin of all moral obligation—the reason why duty is duty—as well as the reward of virtue. Now, since the right occupancy of our time is the great instrumentality of all enjoyment, it is therefore our greatest moral duty—is the Alpha and Omega of all moral obligation. And behold the REWARD of fulfilling this requisition of our mental and physical constitution !

To keep perpetually doing, or else preparing to do, is also the only way to ACCOMPLISH. Who ever knew a great and good man not literally crowded with things urgent to be

done?—too much so to find any time to waste. Great men are occupied more and still more incessantly, the greater they are. Indeed, their very greatness consists in their EFFICIENCY, and this mainly in their continuous and advantageous employment of their time. Nor can the forming minds of children be taught, theoretically or practically, any thing more important than this greatest lesson of life, to IMPROVE EVERY MINUTE AS IT PASSES in doing something promotive of their own happiness, or that of others. To indulge them in idleness—to let them grow up with little or nothing to do, is ruinous, for time and eternity.

195. DOING FIRST WHAT IS MOST IMPORTANT.

Still we may be always doing, yet effect and enjoy but little, because we may busy ourselves with trifles. Since life is too short in which to do every thing, let us neglect all minor matters until after we have fulfilled the GREAT requirements of our being. Out of those innumerable things the doing of which would promote individual or general happiness, to make the best SELECTION is the first and greatest labor. Indeed, wisdom and judgment can be employed nowhere else more advantageously than in choosing WHAT we shall do, and what FIRST. In fact, this choice embodies the very acme of all wisdom. Our governing rule should be to do that first which is most important; that is, which, when done, will confer the greatest amount of personal and general happiness—the only correct standard of all valuation^{1 2}. Oh! what a vast, a lamentable waste of time—this most precious gift of God to man—do we all perpetrate! We consume by far its greatest part in doing things of themselves utterly useless; in making things innumerable of little or no comparative value; in altering dresses, bonnets, and the like, to suit the newest styles; in preparing for and attending trifling, glittering parties, which neither improve intellect nor feeling, but dissipate and deteriorate both; in artificial display, nonsensical amusements, and brainless conversation; in scrambling after money; and in providing and consuming articles of dress, equipage, diet, and the like, utterly useless, and even positively inju-

rious, such as tobacco—tea, coffee—wines, spirituous liquors, splendid houses and equipage, and a thousand things, of which these are samples merely—and all for the sake of APPEARANCES, or to be FASHIONABLE. A few of our ANIMAL PROPENSITIES now engross most of our time and energies, besides enslaving our entire nature; whereas our MORAL and INTELLECTUAL should guide and govern both our time and pursuits. Deduct from the sum total of human life all the time spent in providing and consuming unnecessary and injurious EXTRAS—in useless cookery; fluttering in the sunshine of fashionable life; acquiring property not required for actual use, etc., and the balance would be mighty small; nor is this despicable moiety properly employed. Is it wise or right thus to give our entire time and selves to these few animal gratifications? Were we created merely, or even mainly, to eat, glitter, sensualize, and amass wealth? “No!” answer Phrenology and Human Happiness. We have other and HIGHER faculties to feed, the due exercise of which would render us unspeakably more happy than we now are. Journeymen and laborers thrown out of employ hardly know that they can spend their time in any thing but labor, little realizing that they could promote their own highest good far more effectually by giving more time to their moral and intellectual natures, and less to their purely artificial and injurious wants. Indeed, men generally act as though to MAKE MONEY or else to spend it in FASHIONABLE DISPLAY or sensual indulgence, constituted the highest good and only enjoyment of life! They overlook the great law of things, that to be happy they must devote by far the GREATER portion of their time and effort to their MORAL AND INTELLECTUAL faculties, the gratification of which should constitute the permanent business of life itself.

496. WASTING OTHER PEOPLE'S TIME.

Men also waste a vast amount of each other's time. Time is life; and as no one has any right to take another's life, so he has none to occupy his TIME, except by consent, and to advantage. Hence we should either benefit our fellow men or let them alone, and be very careful how we trespass on their

precious time. Nor should we allow our own time to be wasted because silly fashion requires us to drop all engagements, however pressing, to entertain company. This requisition I despise and disregard, and give no time to others from mere politeness, but consider my short stay on earth too precious to myself and valuable to my race to be squandered in dancing attendance at the shrine of fashion!

The rich also very generally, unnecessarily, and wickedly consume the time of the poor; first, in requiring them to do ten thousand things utterly useless, such as gratifying merely imaginary wants⁶³, and then in not a quarter paying them for their exhausting toil or precious time. Riches, in fact, consist in possessing the products of other people's time; for what is prosperity but the products of labor, that is, of an outlay of time? "Time is money," and therefore money is time; and to hoard the former is only to possess the earnings of other people's time. Now, by what DIVINE RIGHT do the rich thus squander the hard earnings of the poor? By what right should one man require and use on himself the entire time and LIVES of two, ten, scores, perhaps hundreds of his fellow men, and then pay them hardly enough to keep soul and body together? But of this elsewhere.

497. WASTING TIME BY SHORTENING LIFE.

But the GREAT waste of time consists, after all, in the WANTON DESTRUCTION OF LIFE by violating the laws of health, impairing our powers while we live, and hastening death^{25 26}. Strict obedience to these laws would undoubtedly have protracted the life of every reader twice as long as he will now live³⁶, and the lives of many several times longer²⁸, besides rendering them all several fold more EFFICIENT, and thus have doubled and redoubled our lives many times over³⁵. "Oh! that men were wise! that they understood" and practised their own highest good in this respect! Beholding his utter folly and consummate wickedness in thus prodigally wasting—ay worse than squandering his short life—besides cutting it still shorter by inducing premature death, has opened a deep vein of sorrow in my soul and kept it open—has "caused my eyes

to run down with tears" of sorrow for human ignorance and suffering, in obviating the CAUSE of which I would fain spend my life! My first and great appeal is to MOTHERS, present and prospective, because woman—especially young women—squander most of their time on foolish, ruinous fashion, whereas their time is more precious than that of man, because their maternal and educational relations capacitate them for doing more than man can do.* Yet I must not detail here, but conjure all, in the name of all that is sacred and valuable in your natures, to make the very BEST POSSIBLE use of time, and prolong it to the utmost possible limit by preserving health. Let me also conjure parents and teachers to cultivate this faculty in children by impressing them with the INFINITE value of time, and the best mode of employing it. And may God impress us all with the transcendent importance of this whole subject, and guide us in the RIGHT USE of our probation!

498. RIGHTLY TO IMPROVE TIME PREPARES FOR ETERNITY.

Every deed and feeling of this life becomes incorporated into our characters and goes to make up ourselves; and thus affects us throughout our subsequent life. Why, then, shall not all we say and do in this life affect and go to control our condition in that which is to come? If the consequences of the right and wrong use of time ended with this life, its right improvement would be incalculably more important than our description, than any description, can possibly represent. But they do not. Time is the door to ETERNITY. The use we make of our time here mainly constitutes our conduct and moulds our character in this life, and they govern that which is to come! Time and eternity are separated from each other only by the mere act of dying⁹⁷—are in fact only a continuation of that endless duration into which the first dawning of consciousness usher us. Duration, existence, is illimitable⁹⁸. Man's endowment with Time puts him in relation with—into the midst of—this endless duration. We shall therefore

* A work on Woman, her character and duties, will soon be issued by the Author, in which this whole subject will be fully presented.

exist forever! Why confer on us this power of taking cognizance of illimitable time only to tantalize us with a desire for immortality which must inevitably be blasted? Does God sport thus with man? He will protract our existence infinitely longer than the utmost stretch of imagination and calculation united can possibly conceive⁴⁹⁸. Nor will he behead that existence by separating time from eternity. Will he put us in relation with eternity by bestowing on us this faculty, and then cut us off from it?—We shall exist hereafter, and exist IN OUR OWN APPROPRIATE PERSONS—shall be the same identical beings there that we are here, subject of course to important changes, as we now are between the cradle and the grave, but not such as shall destroy our personal identity. Our MENTALITY, and not flesh and blood, constitutes our personality⁴⁹⁹. Hence, since our MINDS AND CHARACTERS constitute ourselves, and since WE OUR OWN SELVES, that is, our MINDS AND CHARACTERS there will be only a continuation of ourselves here—therefore the consequences of our conduct in this life will be coeval with our entire existence, and influence our condition hereafter. Severing these consequences of our temporal conduct from our eternal destiny, would sever OURSELVES here from ourselves hereafter, which, to all PRACTICAL intents and purposes, would discontinue our existence at death—a doctrine which Phrenology utterly repudiates⁵⁰⁰. * What then can be more clear than that our conduct here will affect our condition and happiness FOR EVER AND EVER? This inference grows NECESSARILY out of man's mental constitution—out of his possessing this faculty of Time. Hence, WHAT-EVER AUGMENTS OUR VIRTUE AND HAPPINESS HERE, MUST ENHANCE THEM HEREAFTER. To improve our mentality here, is to put us on ground higher and still higher throughout eternity, the more we perfect our characters here. This law of mind is full of motive, full of promise, and full of glory.

The results of self-improvement, if terminated even with this life, are worth thousands of folds more than all the effort

* See the doctrine of man's immortality fully proved in the Author's work on Religion under the heads of SPIRITUALITY and HOPE.

they cost. Indeed, the very improvement itself is pleasure. But when we reflect that we are to exist **FOR EVER AND EVER**, and that all our good deeds, holy feelings, and virtuous motives cherished in this life, will shed their benign and progressive influence upon us throughout that illimitable duration in which we are placed, Oh! who will fold their hands and neglect to **CULTIVATE** their god-like capabilities? Who will let the seed time of this life pass without improving it **ALL** to sow **SUCH** seed, to be increased, not a hundred fold, but **INFINITELY** against the harvest of eternity? What we sow here—whatever we may sow in any given day or hour in this probationary state—we shall reap perpetually hereafter, both throughout the subsequent portion of this life, and the entire range of that which is to come! Oh! merciful God! guide us all in the right use of that **TIME** which Thou hast thus graciously bestowed upon us! Thus far we have mis-spent and abused this heaven-born and heaven-tending gift. At Thy feet we implore pardon for the past, and pray for strength and wisdom rightly to improve the future. Oh! guide and aid us through time, in our eventful preparation for **IMMORTALITY**! But the fearful **CONVERSE** of this glorious principle holds equally true.

499. **SIN HERE DETERIORATES FOREVER.**

As a limb once amputated leaves us maimed for life, and as a sin once committed can never be erased from the tablet of memory⁴⁷⁷, or its moral stain wholly expunged from the perhaps otherwise immaculate garments of holiness in this life, so even eternity itself can never wipe out, but will only deepen those stains of guilt in which we dye our characters in this life!

Every deterioration and degradation of our moral or intellectual characters in this life, lasts while the soul itself exists. Since our goodness in this life enhances our happiness in that which is to come, shall not our sinfulness here detract from them hereafter? Are the legitimate consequences of our **VIRTUOUS** conduct to be continued to us through eternity, and not of our vicious? By what law is the one retained and the

other rescinded? ALL or nothing, is nature's universal motto¹⁷.* How fearful, then, the consequences of probationary sins. But from this painful picture let us turn our eyes, as from its reality may God enable us to divert our steps!

34. TUNE.

500. DEFINITION AND LOCATION.

Ability to learn and remember tunes BY ROTE: the MUSICAL feeling and faculty: perception of musical CONCORD and DISCORD: love of MELODY and musical HARMONY: desire and ability to SING, and to play on musical INSTRUMENTS.

LOCATED an inch above Calculation, and externally from Time. It is large in the accompanying engraving of Handel, but small in that of Ann Ormerod, who never could be taught to sing or play. Spurzheim's excellent rule for observing its

TUNE LARGE.



No. 18. HANDEL.

TUNE SMALL.



No. 19. ANN ORMEROD.

size is as follows: Stand directly in front of the subject observed, and if the lower and frontal portions of the temples

* These remarks are not intended, and should not be construed, to deny the doctrine of redemption. They even confirm it. Because unless our conduct here affects us hereafter, even pardon and salvation here would no way affect our future destiny. Special reference is had here, as in most of the Author's writings, to the ORIGINAL constitution of mind, irrespective alike of the fall or restoration.

—an inch above Calculation, and three-fourths of an inch above, and slightly externally of Order—are full, and project out evenly with the outer portions of the eyebrows and cheek bones, Tune is large, but small in proportion as they retire here. Still, it being located in a kind of corner, where large Perceptives crowd it outwardly, large Constructiveness forward, large Ideality and Mirthfulness downward, and the temporal muscle passes over it, its position varies somewhat, which renders observation more difficult, except in the heads of children, in whom it is generally larger than in adults, and easily and accurately observable.

501. ADAPTATION AND PRIMITIVE FUNCTION.

GOD has created a MUSICAL OCTAVE. This scale of harmonious sounds exists, and is the same throughout all time. Even the sweet warbles of feathered songsters accord with this scale. Music is music the world over. Nor does this musical element exist merely, but man is also endowed with a faculty which puts him in relation with it. This renders him a MUSICAL BEING. Indeed, this element constitutes an integral portion of every human being, as much as lungs or observation. All are endowed with more or less of this faculty, as much as with hands, Benevolence, or Appetite. It is as necessarily a portion of every mind as reason or memory. None but idiots can be born without some of all the faculties, Tune of course included. This faculty adapts man to this musical ordinance of nature. It renders those gradations and successions of musical sounds which constitute music to the refined Anglo-Saxon, musical to the red men of the forest, and to the sons and daughters of Siberia and China. It renders concord delightful and discord repulsive among all civilized and savage nations, and throughout all past and coming time. It also capacitates man to experience a great amount of exalted pleasure in hearing and making music. It is even the instrumentality of some of the most exquisite and thrilling emotions of his being. This faculty blotted out, no one musical note could be distinguished from any other—no conception of music could exist—and therefore that impas-

sioned delight now experienced in its exercise would be unknown. But with both this element in nature and faculty in the human soul, we can experience and express some of the most elevating, refining, and delightful emotions of which our natures are susceptible.

502. LARGE, SMALL, AND COMBINATIONS.

Tune learns to sing by ear, or by hearing tunes sung or played. Disdaining the trammels of notes, gamuts, fa-sal-la, etc., it bursts forth in spontaneous expressions of this musical passion by harmonious sounds. It employs notes, instruments, and the science of music as secondary attendants only, not as principals. **LARGE** Tune easily learns music by rote; catches tunes by hearing them sung a few times, or even once; loves music, and sings spontaneously, or with the true **SPIRIT** and **SOUL** of music; learns to play on musical instruments with ease, and as if by a kind of instinct; easily detects discord, and is pained by it; and loves as well as easily learns whatever appertains to music.

SMALL Tune finds proportionate difficulty in distinguishing notes from each other, or learning tunes "by heart;" is obliged, in singing and playing, to rely on notes and perform mechanically; fails to impart the **SPIRITUAL** in music to his performances; and is indebted more to musical art and practice than to intuitive musical taste and capability. Still, a fine Temperament and large Ideality may love music, and be pained by discord, yet be unable to perform.

Its combinations are inimitably beautiful. Combined with **Language** and the social feelings, it expresses affection and love; with **Combativeness** and **Destructiveness**, it revels in the martial sounds of the fife, bugle, and drum; with **Constructiveness**, it whiles away the tedious hours of labor by song; with **Veneration**, sings songs of Zion, and elevates and purifies the soul by kindling and expressing the sentiments of devotion, gratitude, and praise; with **Parental Love**, sings cradle ditties; with **Mirthfulness**, sings comic songs; and with unbridled **Amativeness** added, joins in boisterous revelry and mirth. Nor is their any end to these combinations. They

can be employed to express most sweetly and powerfully every feeling and sentiment of the human soul !

503. INFLUENCES OF MUSIC OVER THE MIND.

It can also awaken them to a pitch of intensity and power unattainable by any other means. How martial music inspires the soldier with an ardor for deadly combat which nothing else can awaken ! How national songs inspire the soul with love of home and country ! By what other means can love be as readily excited or as rapturously expressed ? Mothers SING their most enthusiastic yearnings of maternal love. Tune, too, lauds or derides in verse and song. "Let me make a nation's POETRY, I care not who makes their laws." But WHY this ? Because SINGING this poetry so thoroughly imbues the soul with its sentiments. And the comic—Who can resist its convulsive power ? Can it possibly be expressed more effectually than by song ? Or can the plaintive ? What will equally draw tears from the sternest nerves ? Or what equally awaken gratitude, or contrition, or animation, or fear ? Or what equally infuse new life and vigor into every physical and mental function ? Or what equally disseminate a cheerful influence throughout the entire being, or exhilarate both soul and body ? Or what equally inspire the divine sentiment of praise to God, or awe of his majesty, or thanksgiving for his goodness, or penitence for sin, or entire consecration to his service ? Neither preaching nor praying bear any comparison with singing as a means of exciting a devout and holy frame of mind. Have a "revival" without singing ? As soon a summer without the sun. But above all, there is a holy, heavenly state of mind, a kind of SPIRITUAL TRANCE—that most exalted emotion which man can experience on earth, in which his soul communes face to face with its God and becomes imbued with his entity—which can be induced and exalted by means of music more than by all other instrumentalities. Prayer is often one of its ushers, but music more frequently and effectually. This holy spell, this foretaste of heaven, mortals rarely enjoy. It is too near heaven for our earth-enthralled souls often to reach, but a heaven indeed

when thus attained. It is in fact a state of holy aspirations and heavenly love! Crumbs of heaven! Literal foretastes of those ecstatic joys which constitute its bliss. This state of rapture in which the whole soul becomes thoroughly melted with holy tenderness, and dissolved by the spirit of Eternal Light and Love, music can do more to induce than all else combined. Indeed, music can be so practised as to become the very chantings of another and a better world, and more effectually to prepare man to join the chorus of heaven than all other means united.

Yet it can also be perverted. If it can be employed to enkindle and express the most refined and delicate susceptibilities of our nature, it can also be rendered subservient to the very worst—the most gross and sensual passions of debased and depraved humanity! The carnal revelings of Bacchus could proceed without music no more than without wine. The intoxicated sing. The debauchee must earouse to music. Nor is there a depraved or fiendish passion of human nature which music cannot reach and stir up to a higher pitch of infernal raving, than all other means and motives united.

504. IMPORTANCE OF ITS CULTIVATION.

An instrument of human happiness and moral purity thus **ALL-POWERFUL**, should be cultivated with an assiduity commensurate with the good it is capable of conferring. If

“The man that hath no music in his soul,
Is fit for treason, stratagems, and spoils,”

all youth, all adults should cultivate this refining sentiment, as a means both of banishing carnality and promoting moral elevation and purity. All children have this purifying gift as necessarily as eyes⁴⁰⁰. To cultivate music is to diminish gross tendencies and sensual propensities, and develop the higher emotions and holier aspirations of our nature.

As a source of innocent amusement, of recreation, and of refined pleasure, what equals music? How can we spend an hour daily more agreeably? Let every family meet once a day or week for a real hearty sing, and their sing will give

them more pleasure than they will take all the rest of the day.

It is moreover a most healthful exercise. Both singing and playing on wind instruments invigorate and enlarge the lungs by inducing their full and frequent inflation. They also greatly increase the amount of air inhaled, promote digestion, and give action to all those internal organs so liable, especially in the sedentary, to remain inactive. Hence, it of course actually **PROLONGS LIFE**, as well as greatly enhances all its pleasures. Good singers have excellent health and ample busts, because singing develops both. Hence their vocal power and flexibility, as well as that intensity of feeling so indispensable to musical **SOUL** and **PATHOS**. Strength of constitution is also essential to strength of lungs, and this to power of voice; so that a clear, strong voice indicates a good constitution, at least by nature, while a weak, husky, quackling voice betokens a feeble constitution. A good general organization is requisite to good singing, and musical practice naturally improves both the entire physiology and mentality. Some medium singers, or rather squeelers, induce bronchitis, but never those who sing naturally, which is indispensable to musical excellence. Those who sing the loudest by no means always sing the best. Singing induces bronchitis only when it is over-strained and artificial, and those very conditions which impair the voice also deteriorate the singing; but than good singing, few things are more promotive of health, life, and happiness. I have always observed that excellent musicians have highly-wrought physiological **Temperaments** or exquisite physical organizations. Singing promotes these by promoting fine feelings, and enhancing delicacy and refinement of sentiment.

505. MEANS OF CULTIVATING MUSIC.

The **EXERCISE** of Tune, like that of all the other faculties, is the grand panacea both for strengthening it when feeble, and still farther increasing its capacity in all stages of development. The great cause of its deficiency is its **NEGLECT**. In common with all our other powers, unexercised it declines—stupi-

fixed by inaction. The more you sing, the more you augment its power and reap its advantages⁶⁰². Then let ALL learn to sing, and if possible, to play. If time is scarce, TAKE time; for what is more important?^{605 603}. Rely upon it, the time thus taken, will be made up many times over, both by its redoubling mental and physical efficiency while you live, but especially by prolonging life. Above all things let CHILDREN AND YOUTH be encouraged to sing. The growing custom of relieving the tedium of the school-room by interspersing music, is admirable. Let it be practised often through the day, and throughout all the schools in Christendom! It will greatly promote study, and facilitate the government of the school, as well as cultivate this delightful and moralizing faculty, and also render the school-room attractive, instead of repulsive. It will keep alive this strong native passion, now allowed to slumber and finally die by disuse. As all children have this faculty by nature, all can or could have become good singers and players if it had been early and duly cultivated. Let children be encouraged to tune their young voices when about the house and fields, both singly and in concert, as well as persuaded to sing instead of contending. Let boys be encouraged to whistle and play on instruments, and laborers make field and forest ring and echo with their lively, thrilling notes. Let mothers especially sing much to their children, as well as strike up cheerful lays when about the house and garden, so as to inspire this divine sentiment in all about them, besides thereby giving unrestrained expression to those lively, buoyant, elevated, happy feelings so abundant by nature in their souls. Song in woman is inexpressibly beautiful. She is pre-eminently adapted to pour forth her whole soul in strains of melting pathos. She is a better natural musician than man; and hence can diffuse in society those pure feelings and holy aspirations inspired by music—especially female singing. She can thereby charm her wayward children, and supplant the angry by the enchanting and subduing⁶⁰³. When her children become fretful or ill-natured, she can SING them out of temper into sweetness much more easily and effectually than by scolding or chastisement. One sweet tune, when they are wrangling, will quell wrath and

promote love a hundred-fold more than whips. The former is irresistible, and tames down their rougher passions at once : the latter only re-inflames —. Sweet music will hush still any crying child, and dispel anger as effectually as the sun fog. If mothers would sing their children out of badness into goodness,—would sing to them to make and keep them good, and because they were good—how sweet and heavenly dispositioned they might render them ?

Music should therefore be almost an indispensable qualification and pre-requisite for marriage, and then be cultivated after marriage, even more than before ; whereas domestic cares too often drown its happy notes. Home is the very orchestra of music. All women should be good singers and players, and may often avert the ill-temper and contentiousness of husbands by charming music. Angels live in song, and as woman approximates nearer to them than any other earthly creature, let her cultivate in herself and all around this heaven-born and heaven-tending gift.

Special stress has been laid on singing, not because instrumental music is not also cordially recommended, but because, though the latter can be executed so as to be delightful and beneficial, and though playing on wind instruments is calculated, unless carried to excess, to strengthen the lungs, yet no instrument ever made by man can equal the HUMAN VOICE, either for melody, richness, expression, or musical effect.

506. RIGHT DIRECTION OF MUSIC.

ALL-POWERFUL as this faculty is for good, it is proportionally so for EVIL. If it can be employed to excite all the better, purer feelings of our nature⁵⁰³, so also it can be used to enkindle the worst passions to their highest pitch of tension and phrenzy. Though music should be assiduously cultivated—exercised as much as kindness, or reason, or any other mental power—and though its deficiency constitutes a great mental hiatus which no cluster of virtues can supply, yet the utmost pains should be taken rightly to DIRECT it. Infinitely better no music, than music perverted. Yet such perversion need not occur. Still, that it is generally perverted, is readily

admitted. Hence, the Quaker doctrine and practice of discouraging, almost interdicting music, has much force ; yet no **ABUSE** of any thing should ever be allowed to prevent its natural use. As well refuse to eat or drink because some eat and drink too much, or interdict reason because it is often abused. No human faculty was ever created to lie dormant, nor can the action of any be suppressed without creating a great mental blank and blemish, and weakening the entire mind, as much as the loss of a limb mars and impairs the body. Yet better this than its sinful exercise. Better lack a good than create an evil. Yet such perversion need never occur. It consists in exercising Tune in connection with animal propensity, whereas music should be exercised under the dominion, and employed mainly to excite the moral sentiments. This landmark is fundamental, and too obvious to require comment, and will constitute an infallible guide to all the blessings that music is capable of conferring. Let us practise music, but cultivate **ELEVATING, PURIFYING** music, and beware how we indulge in that which is sensual and demoralising.

507. NATURAL AND ARTIFICIAL MUSIC.

As all is not gold that shines, so all is not music which makes believe. Music is a **NATURAL SENTIMENT**, not a merely artificial acquirement.

The flute and piano may be thrummed **MECHANICALLY** with very little exercise or culture of this faculty. Artificial music neither comes from the soul nor reaches the soul. It may make us wonder at the skill of the performer, but neither stirs up the deep fountain of feeling, nor sanctifies and makes happy. When art can surpass nature—when man can outdo his Maker—then, but never till then—**NEVER**—can gamut music excell the outpourings of the human soul ! And yet many music teachers actually **FORBID** singing by **ROTE** ! As well pull out the teeth to help eat ! Teach them to sing by ear **FIRSTLY AND MAINLY**. After they have thus learned to sing well, they may advantageously learn the **SCIENCE** of music—learn to read music from notes—but never before, nor as a musical reliance. Learning to sing by rote is also as much

more easy and expeditious than by gamut, as is learning to walk on the feet than on the hands ; because both of the former are natural, the latter artificial. The recent application of color to music—of representing certain musical sounds by certain colors—is undoubtedly advantageous when, and as far as, notes facilitate music ; because Tune and Color are near neighbors in the head, and may therefore properly be associated in action ; but no invention for teaching music MECHANICALLY, can ever either supply the place of nature, or be relied upon instead of the ear, unless it thereby proportionally extinguishes the SOUL AND POWER of music. In general, the more SKILL the less MUSIC. Burning every musical note and making no more, would undoubtedly facilitate the acquisition and enhance the power and pleasure of this faculty, by COMPELLING us to rely wholly on nature—on God's musical lessons—instead of human ingenuity—rather lumber. Still, I would not interdict notes, only make them secondary to the ear, as to both time and utility. If we could have but one, give us the ear ; yet as with arithmetic ⁴⁶¹, so with notes ; rather none, than notes to the exclusion of the ear. Colored people are natural musicians, and often, especially at the south, make hill and dale resound with peals of thrilling music, yet rarely ever learn to sing or play BY RULE, but intuitively, or by the NATURAL exercise of this easily cultivated faculty.

508. THE IMPERFECTIONS OF MODERN MUSIC

Are too numerous, and its errors too glaring, to pass unexposed and unrebuked. The music of our oratorios, concerts, theatres, parties, and even churches and parlors, is almost entirely artificial. The remaining vestiges of natural music are indeed few and trifling. It is mostly strained, labored, and distorted ; and therefore enkindles comparatively but little emotion. Sacred music, if natural and spontaneous, would alone fill all our churches with worshippers, and, however dull or sectarian the sermons might be, keep up far more devotion than exists at present ⁵⁰³. Artificial music in church is like paint daubed on thin, pale features. Hence, religious singing should be executed by those who FEEL truly religious

emotions. How can the irreligious sing praise to God? As well have sensualists to do the preaching and praying! Devotional FEELINGS are as indispensable to sacred music as to prayer or exhortation, because they alone give life and spirit to either of the three. Artificial choir-music produces far less religious effect than the uncultivated prayer or camp-meeting melodies, and lulls to sleep spiritual worship as effectually as does formal preaching or praying. All three are on a par. To reach the soul, singing must come from the soul. As those should lead in exhortation or prayer who feel devout, because no others can speak or pray "IN SPIRIT AND IN TRUTH," so, and for precisely the same reason, should no one lead in singing but he who can sing with the religious sentiment as well as a musical voice. Far better less execution and more SPIRITUALITY. Yet duly cultivate this faculty and we might unite both. All are CAPABLE of becoming as good singers as any now are ⁴⁰¹. Nature has given every human being more or less of this primary element. Early and assiduous CULTURE will, therefore, endow all with good taste and execution. This organ ranges several degrees higher in children than adults, simply because God bestows more music on us by nature than we develop by culture. The artificial music we are rebuking in part causes this decline. Though all children have well developed Tune—sufficient, if improved by culture, to render all good singers and players—yet artificial singing neither awakens nor strengthens this taste or power to execute, which therefore decline from mere INACTION. Thus weakened, girls are set down to the piano AS A TASK, and compelled to practise perhaps several tedious hours daily, and all from NOTES; and hence, unaided by any RELISH for their irksome task, they inevitably become tired and disgusted. Still they must learn to play in order to be attractive; that is, to catch husbands; and when this "chief end" of modern female education is attained, its practice is laid aside; whereas, if they were encouraged from childhood to sing by rote while about the house or employed with the needle, music would be so delightful as to be continued through life—thus pouring a continual stream of pleasure into both their own souls and

all around, as well as fit all who are religious for "singing in the congregations of the Lord." If these strictures should perchance awaken the ire instead of the gratitude of the religious, they are nevertheless reasonable, true, and coincident with universal experience, as well as calculated and designed to improve church music.

Girls are often required to lace or whalebone their delicate forms while they practise, in order thereby to give a "genteel figure." As well bandage an accordeon in order to facilitate its emission of sweet and powerful sounds! We cannot sing without breath; to obtain a full supply of which all compression must be removed from the entire trunk. Unrestrained freedom to dilate both the lungs and the whole internal range of organs, is indispensable to good singing, because the full inflation of the lungs, and contraction of all the anterior muscles of the trunk, give motion to all the internal organs, which therefore require ample room for expansion and contraction. This, lacing prevents, and thus impairs vocal execution.

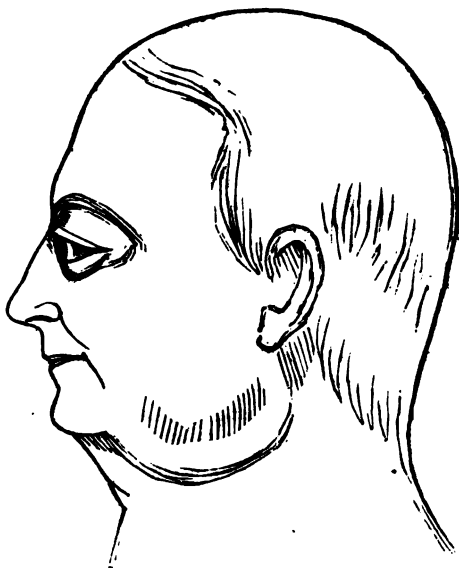
Many of the verses set to modern music are unequivocally objectionable, and even pernicious. Three-fourths of them are love-exciting ditties or else the pinings of unrequited affection. How can a truly refined woman rehearse them, especially as *FEELINGLY* as good execution requires, without crimsoning her cheek with the burning blush of mortified modesty? How passing strange that *FASHION* should applaud these sickening recitals, which she so severely censures elsewhere? Turn the tables—let me utter the same sentiments and words in her stead, and would she not consider herself insulted, and me a reprobate? This straining at gnats at some times and yet swallowing camels at others is *VERY* consistent. Still she has the same sovereign right to utter these unequivocal improprieties thus expressively, which I take in thus censuring them; yet I censure only to improve. Few faculties do I more desire to see pruned of evil and every way perfected.

35. LANGUAGE.

509. DEFINITION AND LOCATION.

The COMMUNICATING faculty and instinct : power of expressing ideas by written and spoken words : ability to call to mind just such words as will CONVEY THE MEANING intended : MEMORY of words : FREEDOM, COPIOUSNESS, and POWER of language ; VOLUBILITY : VERSATILITY of expression : ability to learn SPOKEN languages.

LANGUAGE VERY LARGE



No. 20. COL. GAD HUMPHRIES.

LOCATED partly above and partly behind those bony plates called the super-orbital—those which pass OVER THE EYES and form their roof or upper walls of their sockets. Consequently, the more this organ is developed the more it crowds

down upon these plates, which, in giving way before it, push down upon the eyes, and thus crowd them DOWNWARDS AND OUTWARDS. The foregoing engraving illustrates its extremely large development. Behold the projection of those eyes! They appear as though something behind them was crowding them out of their sockets. See how they stick out beyond the cheek bone—the best standard points from which to estimate its size, because though Language may be large, yet the Perceptives may be still larger, in which case the latter will project forward still farther, even beyond large Language. Hence the fullness of the eyes should not be compared with the eyebrows as much as with this bone below them, which, not being subject to kindred mutations, forms a correct measuring point of observation. When, however, the person is tall, and his phrenological organs therefore long, as in Henry Clay, Language also becomes elongated, so as to run forward OVER the eyes, and thus crowd them more DOWNWARDS than outwards. In such cases the eyes are set far BELOW the eyebrows, and their under portions press out the under eyelids, where a close eye, aided by this suggestion, will readily detect its development.

510. ADAPTATION AND PRIMITIVE FUNCTION.

Man is constitutionally a communicative being. He has thoughts, knowledge, and feelings to impart which is pleasurable to himself and profitable to his fellow-men. But for SOME such arrangement, all interchange of ideas and sentiments must have been unknown and impossible! Blot every word ever used forever from existence and let no others be substituted—totally abolish writing, reading, printing, and conversation—and what a complete business, social, intellectual, and moral STAGNATION would inevitably ensue! Few wants could have been expressed or supplied, and few commodities ordered or feelings interchanged. No kinds of news could have been circulated. No sermons or lectures could have been delivered. No books or papers could ever have been printed. No conversations of any kind could ever have been held among mankind! Except by means of natural language, no inter-

communion of man with man could ever have taken place. Thus most of our powers must have been smothered for want of stimulus to action, and man's condition rendered most lonesome, helpless, and wretched! But thanks to infinite Wisdom and Goodness for this communicating capability! He has endowed man both with organs of speech and a primary mental FACULTY of Language, and thus enabled him to devise various languages and forms of expression for the inter-communication of his wants, feelings, views, knowledge, sentiments, every thing imaginable. On the wings of Language he can fly from pole to pole and talk across continents and oceans! He can transfuse his own thoughts and feelings, good and bad, into the minds of his fellow men, and thereby rouse their passions, command their wills, and incalculably enhance his own and their advancement and happiness.

511. LARGE, SMALL, AND COMBINATIONS.

Its one distinctive function is the expression of thoughts and feelings by words, particularly oral. Fully developed, it therefore gives proportional freedom, ease, facility, copiousness, and appropriateness of expression, or command of language; and also learns to speak foreign languages by hearing them spoken. SMALL Language often hesitates for just the words wished for; is barren in expression; uses common words and those not dexterously; begins a sentence, stops, and begins it some other way; and is lame and bungling in communicating ideas. LARGE Language never hesitates in putting ideas into sentences, which it fills up with a copious supply of words and phrases, proceeding easily and freely, without any apparent effort, or waiting a moment for words. Nor, whether the educational advantages have been limited or abundant, will it confine itself to familiar expressions, but use many words of foreign origin, and be copious and happy. It also interests and carries you along till you are so engrossed that the manner of expression is not noticed. Moderate Language may deeply interest you in the SUBJECT, however imperfect its delivery; but large Language enlists you in its native felicity and eloquence of expression. Thus, Col. Hum-

phries was one of the best of story tellers, and an inveterate talker. With inferior facilities, he had learned to speak several foreign languages just from occasionally hearing them spoken, and learned them so easily that he was chosen government interpreter to the Seminole Indians, whose language, though exceedingly difficult of acquisition, he learned in FOUR WEEKS. So retentive was his verbal memory—another talent conferred by Language, because it has to do wholly with words, which it of course remembers—that he required to hear no word or expression interpreted more than once, always to remember it. He could repeat a sermon verbatim, just from hearing it delivered. He had all the natural elements of a splendid orator, which he would have become but for his ease-loving disposition. Large Language accompanies this temperament more than any other.

Language also gives the writer a copious, flowing style ; yet when larger than the other intellectuals, is more wordy than instructive ; employs many words to express a few thoughts ; amplifies and repeats the same ideas in other words ; and though interesting, yet fails to IMPRESS. Authorship requires more intellect than Language, because it can insert words subsequently, whenever requisite to complete the sense ; but the speaker is obliged to express himself rapidly and spontaneously, and therefore requires a superabundance of words always at command, from which to make a ready selection. Even verbosity, unless too excessive, is better than barrenness, because redundancy is rarely noticed, while hesitancy breaks the chain and weakens the impression.

Yet rapid speaking by no means indicates large Language ; because an excitable temperament thinks rapidly and feels intensely, and therefore speaks fast, even when Language is only moderate, yet uses every-day expressions, and, unexcited, hesitates, often recasts sentences, and is any thing but fluent and easy of delivery ; whereas large Language speaks fluently without excitement, and never hesitates in saying just what it wishes. Still, large Language does not always speak thus freely, because extreme Cautiousness may hesitate, not

for words, but as to **WHAT** shall be said—may stand on the **MATTER**—instead of its wording; or large Secretiveness may restrain the free utterance of thoughts and feelings, or induce instinctive or intentional ambiguity; or Approbativeness and Cautiousness may induce that diffidence which prevents venturing out in conversation or public speaking; or an excitable, nervous system may surcharge the brain with excitement, and thus so far fluster as to confuse both ideas and expressions. And thus of other combinations.

Large Language, with large Ideality, uses good and glowing language; with large Combativeness and Destructiveness, severe epithets; with large Individuality and Eventuality, qualifying epithets; and thus of its other combinations. Indeed, any man's Phrenology can be correctly inferred from his style of speaking and writing. Yet to dwell here would take us too far from our original design. Indeed, all the faculties take their tone and direction from these combinations, which this work does not give, but which will be found fully presented in "Phrenology Proved."

Learning to read foreign languages is generally ascribed to this faculty. It learns to **TALK** them, but learning to read or spell languages, our mother tongue included, requires **Form** to remember the shape of letters and words, and their various conjugations and terminations⁴⁴; large Eventuality to recollect their rules and conditions; large Comparison to distinguish between the various meanings of words; and thus of other faculties, but sufficient Language only to direct them on languages and comprehend their spirit. Therefore a far lower order of Language will suffice to render one a good linguist than a fluent speaker. Hence excellent linguists often have small Language, and accordingly are poor speakers. Even Burritt himself has good Language, yet nothing extra, and is not a great speaker, nor any way remarkable for fluency, but speaks measuredly and almost slowly, and taken out of his beaten track of committed lectures, is only fair.

512. CONVERSATIONAL EXCELLENCE,

Next to intellectual and moral, constitutes the highest order of human attainment and endowment. Man imbodyes the highest grade and the greatest amount of perfection this side of heaven⁴⁰⁰; and since his MENTALITY is by far the most exalted department of his nature^{10 401}, and Language the main medium of its manifestation, therefore to improve our communicating powers is to perfect the mind itself, crown our natures with their second highest ornament, and incalculably promote personal and general enjoyment. Chesterfield has well said that good conversational powers are an open and universal letter of recommendation. They charm all who listen. They imbody the most perfect of all means of communicating instruction, ideas, feelings, and all the operations of mind. They persuade at his pleasure who wields them, and thus become the highest instrumentality of success. They also give their possessor command over MIND. To be able to mould the plastic clay, or fashion the marble block into the external image of humanity, is indeed a great and glorious gift; but to mould MIND ITSELF, to MODEL CHARACTER, CONTROL OPINION, and DETERMINE CONDUCT—ay this is the highest power bestowed on mortals, because instrumental of the most happiness¹. What would our every reader give—what NOT give—for conversational and comparing accomplishments and powers? But another still higher order of attainment is the unbounded

513. POWER OF ELOQUENCE.

Behold Demosthenes rousing electrified throngs till they seize their arms and wildly exclaim; "Let us march against Phillip. Let us conquer or DIE." Behold a Cicero wielding the most powerful sceptre on earth by his flowing and effective eloquence. Behold a Burke speaking not mainly to the few thousands crowded around him, but to a mighty empire—to the entire civilized WORLD, and for ages after his voice was hushed in death. Behold a Patrick Henry enchanting and rousing his fellow citizens at home, and his compatriots in Congress, till he prefaces and ushers in that immortal declara-

tion of HUMAN FREEDOM which is now undermining every throne and dynasty on earth, and will ultimately enfranchise the race itself, and give to oppressed humanity for ever the glorious birthright of LIBERTY—civil, ecclesiastical, and intellectual. Behold O'Connell, thronged wherever he opens his mouth. A NATION at his feet, and hanging on his word! He says forbear, and they forbear, though lashed up to desperation and frenzy by oppression and starvation. Let him say "fight," and nations rush to mortal combat. Give me ELOQUENCE—in the pulpit, in the forum, or on paper—and I will mould MIND, fashion MOTIVE, and develop SOUL. I will wean erring humanity from its fooleries and its errors. I will make sinful, miserable man, VIRTUOUS AND HAPPY. I will REFORM AND ADORN MY COUNTRY till it becomes the MODEL NATION of the WORLD. I will even make earth another Eden. Only give me ELOQUENCE, I care not what you take—take this boon, I care little for what is left.

514. ELOQUENCE NATURAL, BUT CRIPPLED IN YOUTH.

All mankind are NATURAL ORATORS. Hear that child relate some interesting incident, or that little girl narrate some exciting event. She does not stammer for want of words, nor for just THE word required. Every sentence is well conceived. Every emphasis is exactly right. Every inflection is perfect, and most expressive and delightful. Every word is well chosen, and the whole flows on so charmingly and expressively that you would think she had been taught by angels. God has taught her. All children are eloquent BY NATURE, and eloquence itself. They speak spontaneously and therefore effectively. Hark! Hear you that deep, melodious voice in yonder woody glen? That son of the forest—one of nature's noblemen—is pouring forth in the red man's council such strains of eloquence as were never heard in civilized life. Indian interpreters, accustomed to hear both speak, all concur in pronouncing the latter the more eloquent—more condensed, elegant, and effective. Read Logan's speech, and Blackhawk's narrative. Tell your story half as well. But WHY this Indian superiority? Sha^{ll} even the untutored SAVAGE

excel those who have been at school and college ever since they left the cradle? Shall childhood eclipse MATURITY? We were ordained to grow BETTER as we grow older, not to deteriorate.—Shall that improvement of brain and mind consequent on physical maturity, aided by years of daily PRACTICE only IMPAIR delivery? Yet such is the actual fact. Of this, all children compared with adults or with themselves when grown, are living samples. Language was given us to express what we think and feel, and ALL; not to deface and bauch the inimitable beauties of mentality by its bungling expression of them. The rich ideas and exquisite feelings of ninety-nine hundredths of mankind lose nine-tenths of their beauty and force by being thus choked, stifled, and marred in utterance. Where every word might charm and every sentence move, the former often grate, and the latter disgust. How many readers are conscious of their utter inability to convey in words one-tenth of what they feel and know? How many are mortified daily at their clumsy, halting delivery, whom nature capacitated for splendid speakers, or at least endowed with a high order of conversational gifts and graces? How exceedingly defective men are in their manner of expressing themselves! Yet this is not nature's fault, but our own. After she has done thus much to render us so eloquent in childhood, does she wrest from us so important a gift just as we begin to taste its sweets, even though its value increases with age? Does she ever trifle thus with man? Never; but our imperfect, paralyzing, perverted EDUCATION literally STIFLES natural eloquence in the bud of youth. This glorious sun goes down before it fully rises. Nearly every thing connected with existing educational systems tends to CRIPPLE instead of developing delivery. It is distorted instead of being perfected; and our miserably bungling, limping, clubfooted style of conversation and speaking is the sad consequence.

515. MEANS OF IMPROVING CONVERSATION AND DELIVERY.

But this glorious gift is susceptible of IMPROVEMENT, and to an astonishing extent. Undoubtedly every reader, by duly cultivating his natural gifts and graces, might surpass our

best speakers in both conversation and delivery. Certainly all can incalculably improve both. Would you, then, who hesitate in conversation, and stammer in speaking, perhaps cannot speak at all in public—you who have good ideas and glowing feelings which you would give fortunes to be able to convey, but either utterly fail or else fall so far below your conceptions as to spoil even the attempt—learn the CAUSE of this decline? Look for it in your having been compelled to sit on a bench and say A⁴⁸³, and to smart under the lash or ferule every time you whispered. Or would you learn the remedy? TALK. Drive out your ideas—well if you can, and as well as possible—but well or ill, give them UTTERANCE. Join debating and speaking societies. Seek and make opportunities for engaging in conversation and public speaking. Do not quake to appear before an audience; they are only men. Let us have vastly more public speaking on temperance, science, religion, and all moral and intellectual subjects. Religious meetings afford excellent facilities, where the pastor tries to bring forward his lambs, for improving this gift, and at the same time doing good. Bear in mind that its EXERCISE is its restoration, just as its inaction was its decline. Use WORDS, oral and written, in public and private. This will discipline Language and augment its power. Action—EXERCISE—this is the sovereign mental panacea, the universal cultivation of mind⁴⁰⁰.

CONVERSATION furnishes the very best possible opportunity for cultivating and improving style; because while others are talking, we can both listen and arrange our own ideas and language. Those who cannot be really eloquent in conversation, cannot be eloquent anywhere. It lacks neither interest nor excitement, because both are brought to their highest pitch of healthy action. There is also something in the very nature of this conversational interchange of ideas and feelings—in answering, replying, and answering again—every way calculated, not only to elicit mental action and beauty of sentiment, but also to facilitate this eloquent, charming, forcible expression. In public speaking, the sentences must be cast too rapidly to allow that strength of thought, that arrangement of ideas and

sentences, or that beauty of diction, amply provided in conversation. But these facilities are too little improved. Neighbors spend far too little time in this interchange of ideas and sentiments. Man was made to talk much. One boon my soul desires—frequent and protracted CONVERSATIONS with those choice spirits occasionally met in our journey through life. Few know how to converse, or attempt to improve. Most conversation is tedious. Few talk IDEAS, and fewer still take pains to express them WELL. But when we do meet kindred souls, or those highly gifted in conversation, hours become minutes, so much more do we enjoy and live in their society, than in ordinary life. Oh ! for a life-time, an ETERNITY of such enchanting converse !

One conversational excellence should be generally adopted. Each should speak longer AT A TIME ; say from one to five minutes, or till he has fully presented his particular idea in its various bearings. To do this effectually, a score or two of sentences—a young speech—may sometimes be required ; but let the others wait and listen without interrupting till their turn arrives, and then pursue a similar course. This will take time, but GIVE time ; for how can it be spent more pleasantly or profitably ⁴⁹⁶ ?

Let us then cultivate this glorious gift, and improve those conversational faculties thus bestowed and even urged upon us by our bountiful Creator. Their assiduous improvement will enable us to diminish existing blemishes, and add many strokes of beauty and impressiveness, perhaps enable us literally to charm mankind by the perfection of our diction and composition, and contribute more to the happiness of ourselves and fellow men than if we possessed fortunes.

CORRESPONDENCE also furnishes another excellent arena for the exercise and consequent improvement of Language, and indeed of the whole mind. It is naturally and eminently calculated to perfect our style of expression, and should be universally practised. If you have little time, yet TAKE time thus to cultivate Language as well as to cement the feelings. Authorship should not be confined, as now, to the few. All should put thoughts on paper, and apply to themselves, this

stimulus to communicative progression. The time will come when that mass of intellect and exalted sentiment now pent up in "the million" will be developed—when men will traffic in the productions of mind as much more than in lands and goods as they now do in the latter more than in the former. Ideas will yet become the great staple of human commerce. The press is to be augmented a hundred thousand fold. Communicating and receiving ideas are yet to engross most of human time. "Knowledge shall run to and fro, and be increased" illimitably. In short, the exhaustless beauties and powers of the human mind are to be developed beyond our utmost stretch of imagination, by this verbal and written inter-communication of ideas and sentiments. For this mainly was man created ; and I hail with joy cheap books, cheap postage, phonography, every increased facility for the MANIFESTATION OF MIND, and exhort all to take and make every suitable opportunity to EXPRESS THEIR IDEAS. Also

516. USE GOOD LANGUAGE.

To communicate WELL is more important than quantity. Speaking ungrammatically and bunglingly is even injurious, because it confirms a bad practice. It is ever more essential to express ourselves elegantly and forcibly than to rattle away without sense or beauty. The sole constitutional office of Language being to express our ideas and sentiments, it becomes more and more perfect and useful, the more effectually it subserves this sole end of its creation. Hence, whenever a few appropriate words express more than many inappropriate, they accomplish more and are preferable. In general, the fewer words the better, provided they fully convey the precise MEANING intended. More are useless clogging lumber.

517. PERSPICUITY, ORNAMENT, NATURALNESS, ETC.

PERSPICUITY is the first and highest communicating excellence. You speak and write solely to be understood ; and the more you enable listener and reader fully to comprehend your precise ideas, the more perfect your communicating powers. Seek perspicuity FIRST, so that your entire mental operation

may be so fully and clearly conveyed to the listener and reader, that they can neither mistake nor doubt. Be distinct and specific.

Next, be IMPRESSIVE. You speak or write solely to impress your own mental operations on their minds. Then, so express them as to render the transfer entire and complete. In attaining both these ends, more depends on the general framework of sentences than their wording. Especially do we require to begin and end right, as well as to insert their various adjunctive clauses, each in their own places. There is a right and wrong arrangement for every division, idea, sentence, clause, and word, of every discourse and work, as much as for hand, eye, and every part of the body—one which helps deepen and perfect the general and specific impression. The difference in the effect produced by transposing clauses and words is indeed great, as all can see by placing them differently in the same sentence. In fact, when walking or at work, so that the mind can be employed in self-improvement, to frame ideas into sentences, and then alter and modify in order to perfect them, is a most excellent mental discipline, as well as promoter of correct and forcible conversation and delivery.

Add ORNAMENT also to perspicuity. Nature adorns all her works—is indeed one grand galaxy of beauty. Beautiful, charming, the flower-spangled lawn, the human form and face—all creation; yet what is as PERFECTLY enchanting as elevated sentiments and sublime ideas elegantly expressed? You may gaze in ecstasy on a beautiful face—the highest order of beauty of form; but let me behold beauty of soul, as manifested by words. What else imbodyes more of the truly Divine? Has nature provided so amply for adorning her physical works, and not for still farther ornamenting her highest work of all? Has she stamped so high a grade of beauty on the human form and face, and one far higher on the soul, and yet neglected to adorn its principal avenue of manifestation? Such ornament has been created.

We speak properly of “flowery language” and an “ornate style.” Let others paint the external man, me the internal.

Give me elegance of style, I care nought for gaudy attire or splendid equipage. And yet how many a try-to-be beauty spends hours daily in preparing and putting on these outward adornings or rather deformities—which are perfectly ridiculous in themselves, and tolerated only because fashionable—without making any effort to beautify the mind, or polish its highest order of manifestation. What is more supremely ridiculous than a lady, fashionably attired from head to foot, and assuming all the airs of would-be attractiveness, yet whose language is insipid and ungrammatical. The eagle and turtle harnessed up together would make a better match. Crowns on simpletons would be less incongruous. Rather elegance of expression with rags, than showy attire with awkwardness of expression. Strange that standards thus utterly absurd should be allowed to govern rational beings! They would do for monkeys; but for rational men to rate fashionable habiliments above this second highest mental accomplishment, shows how low in the scale of being man yet remains. The mere *STYLE* of dress—not its comfort, or utility, but its particular *FASHION*—really, to what does it amount? But to esteem conversational excellence so much below what is so utterly insignificant—how lightly is so exalted an accomplishment esteemed! Let such glitter on; but let all who value *MIND* take unwearied pains to improve its verbal manifestation. Let us develop by culture that exhaustless beauty of style conferred on all by nature, and on some so lavishly. Oh! if men would but take half the pains to ornament their conversation which they do their persons, every sentence would be charming, and every book enchanting, and all interchange of idea a perpetual feast. Let us all strive to beautify and perfect every sentence we utter and write. Still, more ornament than sense is disgusting. We require the sweet AND useful, but the latter governing.

NATURALNESS or *simplicity* is another important requisite in a good style. Whatever is natural, is therefore beautiful and also perfect. Of nothing is this more true than of the manner of expressing ideas. A strained, labored, far-fetched, artificial, involved style, is proportionally imperfect. Chalmers

style I do not favor. It is over-wrought, swollen, difficult of comprehension, and to me, far less interesting and impressive than one more natural and less artificial. Our words should be placed in nearly or quite the same order on paper in which we speak them. One great fault of modern style is its departure from this oral and natural standard. Let **SIMPLICITY** and naive characterise all you say and write, as well as your style of expression. Whoever is natural in this respect is therefore elegant.

518. STUDYING THE DEAD LANGUAGES.

But some word-bereft stammerer repines, "I would give the world to speak fluently and converse freely, and though I have tried my very best to discipline Language—have learned Greek, Latin, Hebrew, and Arabic; have translated Virgil, Cicero, Horace, Demosthenes, and Homer—yet am entirely unable to speak in public, and converse only indifferently." I pity you for your waste of time and labor, and can put you upon a **SHORT AND SURE** road to your end. Lay by languages, but **TALK AND SPEAK INSTEAD**. "But I thought the study of languages cultivated Language." This is a fatal error of the learned world. Language **COMMUNICATES**, and can be strengthened by exercise only, alone. This is fundamental truth⁴⁰⁹, though at war with the learned (?) world. As well send a child to the equator for ice, or a youth to the poles for flowers, as send the former to "sit on a bench and say A," or the latter to college to study dead languages, in order to make them good **SPEAKERS**. Modern education **PREVENTS** instead of promotes good delivery, because it restrains the **EXERCISE** of Language in hourly **CONVERSATION**. But the injury it inflicts on **HEALTH** is its greatest evil. Out of fourteen graduates who took the highest honors of their respective classes, in seven successive years, at one of our best colleges, **TWELVE** died within **TWO YEARS** after having graduated! And if this average destruction of health occurs in the best scholars, its proportional enfeebling occurs in the different grades of scholarship. That modern education, from the bench-sitting "A," to the collegiate "A. M.," is constitutionally injurious to

health, is both general fact and physiological truth. By thus enervating the brain, it impairs both brain and mind in general ^{17 18}, and the speaking capabilities in particular.

Who but can converse, write, and speak vastly more elegantly, fluently, and forcibly when well than unwell. The reason is that most intimate relation sustained by the brain in general ¹⁸, and its base in particular, to the body. Hence, whatever impairs the health, as the study of languages generally does, thereby actually weakens Language, instead of strengthening it. Hence, also, in order to improve Language, first INVIGORATE HEALTH ⁴⁰⁸. Next TALK much ⁴¹⁵ and well ⁴¹⁶. But this impairing health by thumbing lexicons in order to graduate, and then speaking from MANUSCRIPT—great speaking (?) this—will render a naturally good speaker as dull and prosy as most graduates now are, and as monotonous in tone and mechanical in gesticulation as though mind and body had been confined all this time in a strait-jacket. Compare Washingtonian eloquence and persuasive power, with the college best whittled down to a point. Contrast stump speakers with D. D.'s. Compare Methodist preachers with Presbyterian; which are the most effective speakers? Not the Greek and Latin student, but those who begin and practise SPEAKING from first to last. Few sparks of eloquence escape collegiates except what congeal in their pens. WRITTEN discourses, however labored, seldom come from the soul, or reach feeling or conduct. True eloquence rarely grows among Latin rubbish or Grecian lore, but must be FELT. It takes SOUL to speak to the purpose, and soul WILL speak unless hampered by antiquity. The Poughkeepsie blacksmith and rustic farmer often out-speak, out-argue a score of the very best lawyers, doctors, and ministers put together! Test this statement by FACT and learn the great PRACTICAL lesson it teaches.

519. LEARNING LANGUAGES ORALLY.

Let me not, however, be understood as condemning all knowledge of the dead languages, but only the mode in which they are now TAUGHT. They are eminently useful, yet should be taught and learned ORALLY mainly. Books should be used as

AUXILIARIES only. Teach a student languages by **TALKING** them, and he will learn them thoroughly in one-tenth the time now wasted, and also **RETAIN** them; whereas most graduates, after having spent several of their best **YEARS** in half-acquiring them, so far forget them after leaving college, that many, probably most of them, cannot read an ordinary sentence in Greek, Latin, or Hebrew, off-hand, without a lexicon. Yet pupils of ordinary capacity, by living only a few months among the French, Spanish, Germans, or even Indians, or wherever the **CONVERSATION** is in a foreign language, catch it by instinct, so as both to talk and remember it, even without **TEACHERS**; much more with them, and when they **STUDY** as well as hear. To teach and learn all languages **ORALLY MAINLY**, is the only method which harmonizes with the **LAWS OF MIND**. Yet the best time to acquire languages is in **CHILDHOOD**; the parent, nurse, or teacher, **TALKING** and **EXPLAINING** them by word of mouth. They are thus easily learned and never forgotten.

520. THE STUDY OF GRAMMAR

Is generally supposed to impart correctness of expression, and may perhaps render some service in conversation and style, just as mechanical arithmetic may aid Calculation, and notes music, yet like them should rank far below **PRACTICE AND ATTENTION**. We do not stop to **PARSE** as we talk. What writer or speaker squares his expressions by the rules of syntax—only a summary of the genius of the language. Studying this spirit of language **PRACTICALLY**, is the great teacher of grammatical accuracy. There is an inherent right and wrong mode of expression to every sentence, and man has a correct ear for language as much as for music. To speak and write correctly is as natural as to calculate figures right, provided bad conversational habits have not been formed beforehand. Those who will notice what **STRIKES** them as right and wrong in modes of expression, will soon catch the spirit of language just as we catch tunes by hearing them sung. After this has been done, grammar, or the **SCIENCE** of language—for all languages are scientific as much as math-

ematics—may be advantageously studied. Still there yet remains some great and radical defect in most or all existing systems and methods of teaching grammar. Grammar should be taught ORALLY in conversational explanations, mainly, and less from books. That no popular grammar imbodyes the true genius and spirit of language, is rendered perfectly apparent in James Brown's "Appeal," a perusal of which will shed much light on this subject. "Murray's Grammar" is most bungling and imperfect. Kirkham's is a vast improvement, yet by no means perfect. Natural grammar is based on the constitutional functions of all the intellectual faculties, and of course involves POSITION as well as other things, a principle incorporated into no grammar extant. On this point H. J. N. Benedict very appropriately observes:—

"The verb, if placed by itself, must command: if combined with a nominative, without accompaniment, must declare: if placed BEFORE the nominative, must question: if it end in *s* or *th*, must declare or question in present time, and must have a nominative of the third person and singular number: if it form its personal variation in *st*, the nominative must be a pronoun of the second person singular. The noun in English has five cases, four of which must be determined by the POSITION of the noun. All words placed between the article and noun must be adjectives; also all words placed between the possessive case and the name possessed, must be adjectives, and no other part of speech can be placed there."

Twenty years will see a great and much needed improvement in this branch of science. Our best grammatical instructor is observation of both the accuracies and the inaccuracies of expression.

521. EMPHASIS, ARTICULATION, INTONATION, ETC.

Mere words express by no means all the ideas and sentiments conveyed by conversation and speaking. A far higher, finer instrumentality of communication consists in the WAY they are spoken. The same words, placed in the same order, can be so uttered as to signify precisely opposite meanings. Thus, "gone to Boston," can be so spoken as to declare that the person before mentioned has gone, to ask if he has gone, and, uttered ironically, to deny his having gone. Or we can so



utter given words and sentences as to enhance their meaning from a slight grade of emphasis along up to a most powerful condensation and augmentation of meaning, just by different intonations, inflections, and degrees of emphasis. The Author is not attempting to give a work on elocution, though one should be written PHRENOLOGICALLY—that is, analyzing the mental faculties, and showing what intonations express each one of them—but will call attention to those items worthy of special attention.

1. EMPHASIS. Language is so formed that many of the words are unimportant, and require to be slid along over lightly, while others require to be uttered with the entire stress and stretch of the vocal apparatus, in order to convey their entire meaning. Thus—of, the, is, and, are, and the like, are usually unemphatic, though sometimes THE emphatic words of sentences. When not emphatic, utter them distinctly but lightly, so as to allow the words which ARE emphatic, to stand out by contrast in more bold relief. Those who emphasise most of their words, emphasise none ; because this perpetual tension of the vocal apparatus will not allow that limber play so indispensable to correct emphasis. Such, too, generally induce bronchital difficulties, by this perpetual straining. I speak not of loudness, but of hitting every word a hard vocal rap as it is uttered. But relieving the voice by uttering the less important words lightly, allows you to come down with MIGHTY emphasis where great power of stress is required, and also to talk with such perfect ease as not to strain or irritate the vocal apparatus.

In order to give these emphatic words their full force, stop just before and just after uttering them, as if a comma, semi-colon, or colon—according to the amount of stress required—were placed before and after. This will both relieve the vocal apparatus so that it can come down with power upon whatever requires power, and also prepares the hearer's mind for its reception ; and in general, the longer this pause, the more emphatic ; though it can be prolonged so far as completely to break the connection, and therefore sense. To still farther augment this power of emphasis, put your stress mainly on the emphatic SYLLABLES of the emphatic words. Thus, in order

•

to utter tremendous with tremendous force, do not emphasise every syllable, as TRE-MEN-DOUS, but only the MEN, as tre-MEN-dous—not OVERWHELMING, but over-WHELM-ing, and thus of all other words. Yet utter these unemphatic words DISTINCTLY; that is, form them fully, though lightly. A clearness of enunciation indicates clear thoughts and intense feelings; whereas those who only half form or articulate their words, only half feel and think, or are poorly organised. But those whose articulation is distinct have point and meaning in what they utter, because their minds are pointed.

INFLECTION imbodyes and expresses even still more character and meaning than emphasis. TONES speak louder than words. The way we END our syllables and words, conveys vastly more meaning than even the words themselves. Indeed, they imbody the great secret of effective conversation and speaking. All that is thrilling, pathetic, and soul-stirring, is conveyed by these tones. They are to vocal expression what nerves are to the body—are its “thunder and lightning.” Their power is incalculable. No means of writing them has yet been devised—though will be ultimately—and hence the superiority of the voice over the pen—of extempore sermons over all written productions, however well composed. The latter omits these effective TONES AND INFLECTIONS.

The fidelity and minuteness with which these correspond with the thoughts and feeling is perfectly astonishing. They neither fail nor omit to express perfectly every mental operation. Thus, let me listen through a wall to conversation in an adjoining room, without hearing one word spoken; and I will tell you whether it is ordinary or extraordinary; and if the latter, what emotions the several speakers express. I will also tell you whether they have ever loved, or been disappointed, or are scolds, or are amiable, even though they may be talking on nothing calculated to elicit these intonations. I will also tell you whether they are refined or gross; sensual or pure-minded; dull of comprehension or quick of perception and mental action; are tame or energetic; talented or half-witted; religious or irreligious—though not whether they belong to church—and thus of all important characteristics. Nor

would any money buy this power, and the information and pleasure it affords.

A single illustration of how this is done, must suffice. Some faculties or emotions cut these intonations off short. Combattiveness does this. Others prolong them. Of this class are the affections. Whoever has been thoroughly in love, PROLONGS these intonations or endings of words, very properly called "varnishes" of the voice. Veneration also prolongs and solemnizes. Mirthfulness shortens, but in a very different manner from Combattiveness. Causality imparts weight or body to them. Ideality polishes and elevates. I repeat that every faculty is faithfully reported in these vocal enunciations, which the ear catches and interprets with wonderful precision and fidelity. Still, this is not the place to any more than NAME this subject, and the importance of studying and perfecting intonation. In the American Phrenological Journal for 1846, and in a work on "signs of character" in a course of preparation, it will be fully presented, in connection with its intimate relation to the physiology and mentality. But let me urge the importance of PERFECTING these inflections by that CULTURE already shown to improve every department of our nature. In addition to this, notice the intonations of children when animated in conversation, for their tones are admirable, because not yet warped by art. Woman, also, especially when any way excited, will give you better PRACTICAL lessons in elocution than you can obtain anywhere else. Especially will these intonations of a superior woman happily married be inimitably touching, sweet, tender, and charming. Above all, let your intonation be NATURAL. Never utter your words affectedly, as if trying to put on any thing double-extra.

*522. COMMITTING TO MEMORY

Will also essentially improve Language. Attree, the unrivalled reporter of the Herald, does not write short hand, yet commits long speeches, aided only by running notes, almost verbatim, nearly committing them to memory as they are delivered. He says the more he PRACTISES the better he reports, and that this faculty—truly extraordinary in his head

and character—becomes RUSTY unless HABITUALLY EXERCISED. Children commit to memory with extraordinary facility, and might improve as they grow older, if this power were increased by culture. They all LOVE to commit verses and other things, and should be encouraged to commence long before they can read, and continue through life. Yet teaching children, parrot-like, to commit words merely, supposing that therefore they understand what they learn, is an egregious error. They should exercise their other faculties in connection with memorizing.

523. ALLOWING CHILDREN TO TALK.

As the main improvement of Language in adults is to be effected by its EXERCISE, so pre-eminently with children. "Practice makes perfect" in nothing as much as in juvenile talking. This is the fundamental doctrine of our work—the grand instrumentality, next to health, of all mental improvement. Hence, the way to render a child eloquent when it becomes matured, is to allow the unrestrained use of the tongue during childhood. All children are incessant talkers. They are created thus in order to fulfil man's communicative destiny^{510 514}. Their tongues are always running, whether or not they have any thing to say. Not so with adults. Now WHY this diminution of so essential a gift? "Stop that whispering yonder, or I'll cuff your ears," says a schoolmaster to yonder whispering scholars. If, prompted by the irresistible workings of spontaneously active Language, they repeat the offence, they are chastised. As well punish for breathing, or being hungry, because these are equally spontaneous; and to punish on account of either is equally unjust and cruel. In bestowing this faculty⁵¹⁰, the Author of their being created a DEMAND and bestowed a RIGHT to use it, and even made talking a paramount DUTY as well as a pleasure. Who then shall dare to suppress its exercise, or punish for what God requires? Those who do are accountable to God for annulling his works, and to those restrained, for curtailing so great a pleasure, enfeebling so important a faculty, and thwarting so indispensable an end of their being.

"Then how shall we do?" say teachers. "How can we teach when the entire school is deafening us with their perpetual clatter?" Send them home to be taught by their mothers. "But," mothers exclaim, "how can we endure their everlasting rattling and hallooing? We send them to school to get rid of them!" Then send them to their graves, if so very troublesome. You are bound as parents to seek THEIR good, not your own ease. Expressing ideas constitutionally kindles their flow, and greatly augments mental action; both of which preventing their talking necessarily enfeebles. Hence, to interdict their talking prevents the exercise and consequent discipline of their minds. "But must we be forever harassed by their incessant clamor? Have we not a perfect right to still their tongues?" As good a right as to stop their breath, but no better. Who has given you any right to cramp and retard their INTELLECTUALITY, which you necessarily do by making them hold their tongues? There are of course times when, if duly disciplined, they will gladly listen instead of talking, because interested in what is said, or from filial love—yet this differs materially from compelling them to hold their tongues perpetually in school and out. But sending them out DOORS much, will obviate all difficulty, besides improving their health.

524. USING GOOD LANGUAGE BEFORE CHILDREN.

The value of good conversational powers conjoined with the indelibility of early education and habits, enforces the paramount importance of using good language before children. They are imitative creatures—and learn to talk in exact accordance with the examples set them. The same principle by which they learn to talk English, Spanish, Arabic or Hindoo, etc., accordingly as those do of whom they learn to talk, extends to all the ramifications of talking, and makes them copy all the brogues, peculiarities, idioms, phrases, and forms of speech used by the former. Hence, an acute observer can tell from the idioms and enunciations of persons, not only whether they are Yankees or Southerners, but in what state—"down east," or "south," or "out west," they were brought up. This same law will render children gross or elegant, forcible

or feeble, correct or ungrammatical, in conversation, according as those converse by hearing and patterning after whom they learn to talk.

The way to teach children to talk correctly, therefore, is to talk correctly to and before them. Express yourself elegantly, and they will learn to couch their expressions in beautiful language. Or be bungling and ungrammatical, and they will closely copy the example set them. By as much, therefore, as it is of paramount importance that they learn to express themselves beautifully and forcibly ⁵¹² ⁵¹³, it is important to talk to them and before them in good English and in as elevated and refined a style as possible. This is equally true of style in writing; especially books, for children. Indeed, we all copy more or less the style of the authors read—especially of favorite authors; so that writers should use good language as a means of improving the general tone of conversation and speaking. Speakers also should clothe their thoughts in grammatical and elevated language, because every sentence goes to mould the elocution of the public.* How foolish and injurious then this

525. BABY TALK.

It consists in saying foolish things ungrammatically; and the more outrageously it literally MURDERS good English the more babyfied. If infants require milk to feed their bodies, they surely do not require silliness to nourish their minds. All you say makes its impression on their forming minds. Even before they understand your words, they feel your INTONATIONS, which are flat and pointless when your conversation is foolish, and thus tend to render their minds insipid. But talking ideas even to infants will awaken their ideas, at least through the medium of accompanying intonations ⁵²¹.

* If any, however, think the Author pays too little attention to his own style, he admits that this HAS BEEN the case more than he intends it shall be hereafter. His pressing professional engagements have compelled him to write in great haste, or else not to publish. Better less perfect than not at all. But he endeavors to render his style clear and forcible, as well as natural. He hopes his readers UNDERSTAND him fully and easily ⁵¹⁷.

Children of two years old understand, or are capable of understanding most that is said to them. Hence, since like excites like—talking sensibly to them will quicken their intellects, and clothing good ideas in an elegant, elevated style, besides imperceptibly exciting the sentiment of the beautiful and polished in them, will start them on high ground—will form in them a classic style from the first, which will go on to improve through life—. The conversation of parents and adults to and before children might and should be a perpetual feast, intellectually and morally, to their unfolding minds, and if so, children too would both speak correctly and charm with a beautiful and expressive style,— —would grow up with splendid and fascinating conversational powers, perhaps becoming natural ORATORS, charming and instructing all who hear them speak or talk through life⁵¹⁴! Talk ideas to children or else say nothing, and clothe them in good language, and they will faithfully copy both.

526. WOMAN'S TONGUE—FOR WHAT BESTOWED.

Woman's talkativeness is frequently cast in her teeth as a reproach. That, as often used, it becomes such is too true, yet her constitutional flippancy is one of the chief beauties and excellences of her character. Children, ALL, were constituted to be instructed by CONVERSATION more than from books. You can talk more into a child in one hour than he would learn from books in a week. A good lecturer, say on Phrenology, or any other matter, especially if aided by specimens, can impart and indelibly rivet more real knowledge of his subject in an hour than you could gather from ten hours' reading. Hence the education of children should be conducted mainly by CONVERSATION. This interests, and therefore benefits ten times more than books, and is every way adapted to their capacities, which books are not⁴²⁸. Who will dispute that CONVERSATIONAL teaching has a vast superiority over letters? * [Now "woman's lo-

* A phrenological school has just been founded at Eatontown, N. J., one leading feature of which conducts instruction by conversation and familiar lectures. The educational reform here commenced will incalculably benefit the pupil, and eventually introduce a new era in education. We cordially recommend it to the patronage of our readers.

quacious tongue" was given her in part to enable and dispose her to instruct children by conversation; her large Language and Parental Love combined, making her love to talk to and with them.

Thus nature fits and almost compels her to become their instructress. Mothers are the only constitutional teachers of their children. Unless children are educated at home they never can be educated. Schools rarely, if ever, form either their intellectual or moral characters. Mothers must form BOTH, as a general thing, or else they must go unformed; and hence the flowing style of woman's lips. It is as natural for her to talk as breathe—especially to her own children—which exactly adapts her to this conversatio-educational demand of her children. Still the design of this work precludes our dwelling on this subject sufficiently to present its full force. A full elucidation of this important matter is in reserve for the work on "Woman" already announced.

527 DEFECTS IN THE ENGLISH LANGUAGE.

In many respects our language itself—all languages—are quite imperfect, just as are all man's attainments. He is a progressive being in language as well as every thing else. A few hundred years will see the mode of speaking incalculably improved. The English, as now spoken and written, is rich and copious, allowing the use of many words nearly synonymous, because it is a fusion of the languages of the ancient Britains, Romans, Danes, and Norman French, yet this very fusion has left its seams of union full of flaws.

But its mode of writing is far more imperfect still. It has been written only about six hundred years. Before that the English nobility scorned to speak, write, or use the language of their conquered serfs; and when at length compelled to speak it, they patched it up almost any how, using the same letters to signify different sounds, and different letters to signify the same sounds and even opposite sounds. Thus A has one sound in fate, another in fat, another still in fall, and still another in far. C, k, s, and z, often exchange places, and the great majority of our words are not spelled in accordance with

the true sounds of the letters used. Indeed, this cannot be done till every sound has its letter or character, and every character its sound. For what are letters used but to represent sounds? Then given sounds should be represented by specific characters, and the same sounds always by the same letters, and every primitive sound should have its specific character. This done, when a child had learned these letters it would have learned to read and spell, so that learning these branches would require but a few days or weeks. Nothing would be required to read, write, and spell correctly, but to learn what characters stood for the different sounds. Then reading and spelling would be simple; now they are exceedingly complex. Then they would be easy; now they are very difficult. Then nothing would be left to the memory but the alphabet; now who can always remember whether a word ends in tion or sion; or in zes or ses? and thus of innumerable other cases. Then any one could spell any word RIGHT by spelling it according to the pronunciation, and therefore all who could speak our language or any other, could SPELL AND READ it readily and correctly. Then the dreary years now spent by children in learning to read and spell, would be dwindled into as many weeks, and most of the expense of schooling saved, and health preserved. In short, incalculable benefits would spring from placing all languages on this their only true ground—that of representing every primary sound by a specific character. What but REPRESENTING SOUNDS is the end sought by all writing and printing? This our present writing and printing systems utterly fail to do; yet it is indispensable in all complete systems of writing. This most important end is attempted in

528. PHONOGRAPHY AND ITS ADVANTAGES.

Phonography consists in attempting to indicate every vocal sound by a single character—every sound made by one motion of the vocal organs, by one stroke or motion of the hand. This its fundamental basis must strike all as an invaluable desideratum. Nothing of equal importance can possibly be accomplished; because—

1. It would greatly facilitate learning to read and spell all languages, our own included. Write languages on this basis, and all required to be done in order completely to master any language would be to learn this alphabet, or the characters used to represent given sounds, which any child could be taught in a few hours, or at most days, and also the meaning of words. Now we are obliged to learn all this, and then to learn a thousand and one EXCEPTIONS—worse by far than to learn the rule itself. Thus, we must learn the different sounds of different letters, and worst of all, learn the nearly arbitrary use of many letters, as whether a word is spelled with g or k; or with c or s; and thus in cases innumerable. These, who can remember? Hear some foreign names pronounced, and see how very differently they are spelled. If every word and name were spelled just as it is pronounced, the saving in time and the certainty thereby secured, would be very great.

2. PERFECT LEGIBILITY is another most important end secured by Phonography, which can be read as easily and correctly as print. The advantages of this are too many and too obvious to require comment.

3. It will also AMALGAMATE ALL LANGUAGES, so that in learning them nothing will be required but to learn the definitions of their words. Foreign languages could then be learned in one-tenth of the time now required. The eye and ear would then act in concert. Now they act in opposition whenever words are not spelled as pronounced, which is very rarely done.

4. Writing the Roman characters requires at least five times more LABOR AND TIME than is necessary. Thus, in making an m, we are obliged to employ SEVEN strokes or motions with the pen, five for n, ten for the, six for w, and thus of nearly all our letters; whereas only one stroke should be used to represent one letter and sound. This would diminish, at the lowest calculation, three-fourths, probably five-sixths, of the time and labor of writing—the hardest kind of work—and also increase its QUANTITY. To cite the Author's own case: His SUBJECT MATTER accumulates in his mind five times faster than he has physical strength to put it on

paper. That is, if the time and labor of writing were reduced four-fold—if he could signify as much by one stroke as he now does by five—the average number of strokes now required to form our single letters—he could produce five times as much THOUGHT; and supposing his writings to be useful, could do five times as much GOOD. And thus of other writers, and of all who may have more thoughts than time or strength to put them on paper. Thus would MIND be developed and thought quickened, to the incalculable augmentation of human happiness.

5. Apply this rule of contraction to printing, and we could put several times as much matter on a given amount of paper as now, and thus proportionably cheapen literature, and disseminate and multiply that mental food so promotive of mind. Hence, since mind is the highest and main constituent element of humanity¹⁹, this reform would double and treble human mentality, and therefore life itself and all its pleasures. What other branch of reform is equally needed? Nor can our present bungling system of writing and printing stand a hundred years longer; probably not fifty; so that the sooner it is remodeled the better.

6. This reform would also incalculably improve both the matter and style of all that is written. Most writers can conceive and originate several times faster than write, and must retard the flow of thought so that this slow system of chirography can keep up. As well yoke a snail and antelope together. We require a system of writing which shall enable the pen to record thoughts somewhere nearly as fast as the mind can conceive them, or at least, by which we can write as fast as speak. This can be done. We can move the hand as rapidly as the vocal organs. Hence, if we had only one stroke of the pen for every vocal sound, we could write and report as rapidly as talk; and thus retain that warmth, glow, and rapture on paper now confined to speaking. Add to this that the speaker could subsequently trim and perfect his productions, and how incalculably important the proposed improvement! The sun will never shine upon any invention equal to that which shall enable us to put thoughts on paper as fast as they are uttered

or conceived ; because it will incalculably augment the quantity and perfection of the manifestation of MIND—the highest development of nature. Now our best thoughts and speeches vanish in being recorded WHEN AND AS delivered and conceived.

529. PHONOGRAPHY A TRUE SCIENCE.

7. But its highest recommendation is the science it imbodyes. By science, is meant the fixed ordinances and usages of nature. Nature regulates all her operations by FIXED NATURAL RULES. Whatever the nature of man provides for or requires, is thus governed by EXACT SCIENCE. Thus, his nature requires him to love, and accordingly exactness, system, fixed LAWS, govern this department of his nature, as much as they govern mathematics, and for the same reason.* That there is also as much science in religion as in optics, is fully shown in the Author's work on "RELIGION." Not a function of material or human nature, but is thus governed. Written and spoken language, being natural functions, are therefore governed throughout by these fixed, scientific rules. These being of course specific and absolute, all writing or speaking should be based in or founded on them. Phonography imbodyes this SCIENCE of writing languages. It consists in applying nature's requisition of representing every specific sound by given characters or signs. Its framework is a sound for every character or letter, and a letter for every sound. This is obviously right, and infinitely preferable to our present chirography. Nor is any system of short-hand writing, not based on these principles, worthy of any attention.

A secondary recommendation of Phonography is its forming every letter by a single stroke, or motion of the pen. This phonographic or basis arrangement, therefore, is also scientific, and as we can make manual motions with extraordinary rapidity, a true system of writing will allow us to write as fast as speak. To say, then, that I unequivocally approve

* If this declaration, that love is governed by exact scientific rules, should be new or doubted, see it established and illustrated in "LOVE AND PARENTAGE," in which this science of the affections is given.

of chirography—that I go heart and soul for its universal adoption—is too tame. Nature both **SANCTIONS** and **REQUIRES** such adoption. I regard Phonography as the great **COMMUNICATOR AND DEVELOPER OF MIND**, and therefore as the great mental lever of all reform. Temporary inconvenience would attend the change, but Infinitude alone can measure the good it would confer. Old as I am—valuable as my time is—I shall learn it and reap its advantages, and have my children learn and write it, and recommend its universal adoption, especially by the young.

530. **PITTMAN'S AND BAYLEY'S SYSTEMS.***

In thus cordially recommending Phonography, and claiming that it is founded in science, I would by no means be understood to say that art has already perfected what nature has thus originated. She has marked out the general **PLAN** or ground-work, of a character for every sound, and a sound for every letter⁵³⁶, and then left art or human invention to say by **WHAT** characters each sound shall be represented, or what characters are the most quickly made and easily read. This subject is just beginning to receive consideration. A perfect phonographic system, like an immense building, must embody the perfecting labors of many minds, each making one valuable addition after and upon another, till the whole structure is completed. Still, Phonography, though by no means perfected, is already **FRAMED**, so that we can all help finish it.

Two rival systems are now offered for public canvass and adoption; Pittman's, an Englishman, and Bayley's, a Vermonter. Both are essentially phonographic, yet neither is yet perfected. Which, then, is the better? This important question must be answered mainly by **EXPERIENCE**. Of this, the Author has none in either, and therefore can no more than partially answer, and perhaps then inaccurately. He has heard a lecture on each, and rather prefers Bayley's. And for two reasons.

* Elementary works, explaining both Bayley's and Pittman's systems, can be had for cash, at No. 131, Nassau st., N. Y. Bayley's 25 cents, mailable, and Pittman's 50 cents, bound. They will enable persons to learn by themselves.

1. Pittman's system writes the vowels in after it has written the consonants, and above and below the latter, so that you must take up the pen every word or sentence, and go back to insert them, just as we now do in dotting the i and crossing the t; while Bayley's writes them in and finishes up as you go along. This taking up the pen and going back is objectionable unless you can write an entire letter or discourse, and then re-read and point all at once. If Pittman's can effect this object, its superiority is unquestionable. Reporters can then write the more rapidly, and the printer set up after him without the insertion of the vowels in the manuscript.

2. Pittman represents the p by a light stroke and b by one just like it, only heavier, and this plan of light and heavy letters runs through his system wherever sounds nearly alike but slightly differing are to be represented. These light and heavy strokes cannot well be represented by a pencil, which greatly impairs his system for reporting. Bayley's obviates this difficulty, besides being shorter. Still, Pittman's may have other advantages and Bayley's disadvantages, which my cursory examination of both may not have observed. Bear in mind that I know little of either, and consider neither as at all perfect, but as mere infants, compared with what will yet be devised; just as the steamboat and all other improvements were infantile when first invented. Yet both have invaluable advantages over the present system, and should be examined, and one of them, or something better, be adopted by all lovers of mental progression. God grant that man may improve both his mind itself, and his powers and facility of manifesting it, proportionately with its infinite importance.

531. PROPOSED INVENTION.

Another kindred improvement is required and will soon be invented—that of altogether superseding the composition or typesetting by stereotyping. Now, the types must be set before they can be stereotyped, but why cannot a smooth wood or metal plate, the size of the page, be coated over with wax or some plastic substance, in which the phonographic charac-

ters can be formed, not with pen and ink, but with a style or hard point, and from which the impression can be taken direct ; thus dispensing with paper, ink, type, and composition. Engraving on steel is accomplished by forming the letters in wax spread on the plate to be engraved. What should hinder our stereotyping by a similar process ? These plates when stereotyped from, could easily be re-coated, and thus used continually for years. Will not some ingenious Yankee carry out some plan analogous to this PRACTICALLY, and thereby amass any required amount of wealth, immortalize his name, and confer the highest possible blessing on man ? But for his other pressing engagements, the Author himself would have presented this suggestion experimentally, and may yet.

In order, however, to accomplish so desirable an object, we must use the same characters in writing used in printing. This Phonography ought by all means to do ; yet both Pittman and Bayley are getting up founts of phono-type on the general basis of the common letters. Of this I unequivocally disapprove. That form of letter which is best for writing is also best for printing, and for the same reason. Have them both alike, and when a pupil has learned the letters for either, he has learned them for both. Now we must learn two alphabets—in fact four, one set for common and one for capitals, for both writing and printing. This diversity should be obviated. Let one form of letter represent its corresponding sound whenever and wherever used, so as thus to secure ONENESS of impression.

This proposed invention will require and tend to secure a plain and beautiful chirography, instead of those miserable scrawls too generally used. Yet the former can easily be acquired. See how legibly and beautifully the ancients wrote even our present extremely bungling forms of letters, and “what man has done, man can do.” But give us one easily made stroke for every sound, and then teach pupils to WRITE the alphabet when they learn it, in order to aid its acquisition, and besides learning their letters twice or thrice as quickly and effectually, they would learn to write in and by learning to read, as well as early and easily acquire a beautiful chiro-

graphy. This will also cultivate the art of **DRAWING**, the advantages of which are incalculable.

There is also a great amount of character in the **chirography**. Show me a person's hand-writing, and I will tell you the writer's leading characteristics. This index of character our proposed invention would convey. In common with all other inventions this would throw many out of their trade and accustomed employment ; yet shall this objection, true of all improvements, suspend all progress ? Yet, as with all inventions, it would so cheapen the commodity as incalculably to increase the consumption, and thus actually furnish additional employment. Still, no objection should be allowed to arrest a great public good. To retain the present bungling, costly system merely to furnish employment to printers is poor policy. Better adopt the improvement, yet pay just as much as now, and give them the time thus saved ⁴⁶³ ⁴⁹⁶.

A new invention has been made by which exact copies of all writings can be multiplied rapidly and to any required extent. This invention is invaluable. I shall learn the art, and recommend others to do the same.

37. COMPARISON.

532. DEFINITION AND LOCATION.

INDUCTIVE reasoning : ability and disposition to **CLASSIFY**, and to reason from parallel cases and a collection of scientific **FACTS**, up to the laws which govern them : discovering the unknown from its **RESEMBLANCE** to the known : detecting error from its **INCONGRUITY** to truth, or opposition to **FACTS** : ability to apply **ANALOGY** to the discernment of first principles : to **GENERALISE**, **COMPARE**, **DISCRIMINATE**, **ILLUSTRATE**, **EXPLAIN**, **EXPOUND**, **CRITICISE**, **EXPONE**, employ **SIMILES** and **METAPHORS**, put this and that together, and **DRAW INFERENCES**.

LOCATED above **Eventuality**, and in the middle of the upper portion of the forehead. It commences at the centre of the forehead and runs upwards nearly to the hair, in the form, when projecting beyond the surrounding organs, of a **cone**,

COMPARISON VERY LARGE



21. PRESIDENT EDWARDS.

apex downwards, forming a ridge which widens as it rises. Its ample development elevates the middle of the upper portion of the forehead, and gives it that ascending form so conspicuous in the accompanying engraving of Jonathan Edwards, whose entire intellectual lobe is very large, but Comparison is pre-eminently developed. When it projects beyond the surrounding organs, it rounds out its upper portion, causing it to project forward and upwards, but allows it to retire in proportion as Comparison is less developed. It is less than Causality in Herschel, as is evinced by that darker shading seen to pass up and down the middle of his forehead. Its size is easily observed. It is immensely developed in the accompanying engraving of Shakespeare, at figure 36, and the powers it imparts form the most conspicuous elements of his inimitable writings. His unequalled shrewdness, sagacity,

COMPARISON VERY LARGE.



No. 22. WILLIAM SHAKESPEARE.

analysis of human character, discernment, penetration, appropriateness, cogency, descriptive capability, and perpetual flow of illustrations, were imparted mainly by this faculty. Behold this coincidence between its extreme in his head and character.

533. ADAPTATION AND OFFICE.

All nature is SELF-CLASSIFIED. Thus, all pine, all chestnut trees bear so close a resemblance to all others as to be easily recognised, and thus of all stones, trees, herbs, roots, grains, seeds, flowers, fruits, animals, and things in nature. This classification or similitude established by nature throughout all the vast ranges of her works, enables us to assort animals and things of the same and kindred genera and species. It tells us for certain that a given eagle flies instead of swimming, and merely from its RESEMBLANCE to flying and not to swimming animals, and ranges in classes animals and things, our own race included. It tells us that a strange horse will eat hay but refuse stones, just from his resemblance to other horses. It assures us that all apples grow on trees, and those of a particular kind, instead of in the ground, or in animals or water. It tells us in the absence of all knowledge and

description of him, and with infallible certainty, that the emperor of China has a head, heart, mouth, and other organs, and that he eats, sleeps, breathes, and does many other things, just by his RESEMBLANCE to other human beings. It infers correctly that a fire we never saw before will burn us if we touch it, from its resemblance to all other fire which Eventuality remembers burnt before. It informs us that a given stranger, of whom we know nothing, has bones, muscles, brain, and other organs, and tells us in what parts of his body they are located; that he cannot eat arsenic or iron, yet that he requires food and breath, merely from his resemblance to others of whom these things are true. Before trying it, how do we know that a given tree, cut up and put upon the fire, will burn, evolve heat, and produce ashes and smoke? Or that a particular stone thrown into the air will fall? Or that water will descend, that food will nourish, a given fish inhabited water, and thus of other things innumerable? By their RESEMBLANCE to other things of which we know these things are true. These illustrations show how vast an amount of our most common-place as well as rare knowledge is correctly inferred by Comparison. In short, this great CLASSIFYING law of things discloses the natural history and constitutional character of all animals and things. It is nature's universal key, and unlocks her vast storehouses of truth. But for its existence in nature, no animal or vegetable of one kind would have borne any resemblance to any others of the same kind, nor would men bear any resemblance to each other in appearance or character any more than to trees or elephants. Indeed, no such thing as resemblance would have existed, and all nature would have been one vast bedlam. Or, but for this faculty in man, though things would have been classified, yet man could never have discovered or applied it, nor have distinguished man from brute or vegetable. Yet this arrangement in nature, combined with this faculty in man, enables him to GENERALIZE; that is, when he has learned a general truth inductively, to apply it to all new but analogous facts. Analogy is undoubtedly designed and adapted to convey a vastly greater amount of knowledge than is now learned from it. Inductive reason-

ing is yet in its merest infancy. Its revelations in comparative anatomy, organic chemistry, and many other sciences, fully assure us that it can be applied with equal success in all departments of science, Phrenology and Physiology included. Man has just learned from it, merely from inspecting a single stray bone of any unknown animal, to tell all about the habits and natural history of that animal. What, then, is to be the end of its teachings? Few duly credit it with the reasoning capability it really imparts. It reasons more and better than Causality. But of this hereafter.

534. LARGE AND SMALL.

LARGE Comparison readily detects resemblances, differences, and bearings; generalizes correctly from a few facts; sees from a little what a good deal means; spells out important results from slight data; draws INFERENCES readily and correctly; discerns at a glance the point at issue, and speaks to it; is copious and appropriate in illustration, and frequently explains its meaning by supposing similar cases; easily makes itself fully understood; clears up difficulties; explains and expounds clearly and plausibly; readily detects incongruities and errors; is apt to criticise and pick flaws; and seeks to trace facts out and up to those general principles which govern them.

SMALL Comparison fails in these and kindred respects; does not bring ideas and remarks to a specific point; fails in clearness, and is bungling and inappropriate in illustration and remark; is vague and pointless in both ideas and their communication; and is imperfect both in the classification of his own ideas and in perceiving the general drift and bearing of things, especially of nature's operations. There are, doubtless, two organs of Comparison: the lower one more appropriately connected with the physico-perceptives⁴¹⁴, in comparing physical substances with each other, and reasoning thereon; while the latter, combining more naturally with the moral faculties, reasons from the physical to the moral world; compares ideas; criticises and discriminates between them; and imparts logical acumen.

If this be so, morals and religion are distinctly brought within the scope of our investigating powers, so that we can know much more and more certainly, about ethics, a future state, the spiritual world, and kindred subjects, than is generally supposed.

535. INDUCTIVE REASONING

Consists in discerning, from a great number of converging facts, the law which governs them, and then of inferring that all similar facts are governed by the same law. This mode of reasoning, properly applied, is an infallible exponent of truth. It bases its conclusions in FACTS, by analyzing which, it ascends to those comprehensive laws which govern them. Trying to reason without facts, is like attempting to build without a foundation. The "major," "minor," "sequiter," "non-sequiter," and all the scholastic speculations of the ancients can never discern truth or detect error, but inductive investigation can do both. The former can be made to subserve error almost as plausibly and universally as truth. The latter clearly discerns and defines universal truth, and infallibly exposes error. It teaches us EXPERIMENTALLY, and therefore with absolute certainty. Results thus obtained, the human mind constitutionally regards as CERTAIN, and relies upon them as infallible truth. It is the "royal road" to positive knowledge, and leaves no room for doubt or evasion. Rightly applied, it never misleads. It constitutes the great key to nature and her works. It unlocks her laws, and shows us what will be from what has been. In fact, it is the great expounder of general laws, and the great teacher of the human mind, and especially of the juvenile. It teaches children to avoid the fire; that to fall will cause pain; and thus of all kindred knowledge they acquire. As we grow up, it soars into still higher regions of truth, and, if duly prosecuted, would teach man a thousand fold more than he now knows.

536. CULTIVATION OF COMPARISON.

Though Individuality observes things and their conditions, and Eventuality treasures up their doings in the memory, yet without Comparison to complete the process by discovering

the laws which govern things, and work up the materials furnished by the other faculties into correct conclusions, we could never learn even that fire would burn ; and, therefore, though we might amass knowledge, yet we could never apply it. The other faculties may appropriately be said to "put out" words, while Comparison SPELLS them. Since, then, Comparison lies at the very basis of all practical application of experience and knowledge—since it teaches us so vast an amount of truth taught nowhere else—it should be assiduously cultivated from the cradle to the grave, and that extension or universality of views which it proffers, be gladly improved. How, then, can this, its improvement, be effected ? By REASONING INDUCTIVELY—by running facts up and out to the great principles which govern them : that is, by DRAWING INFERENCES from all we see, and SPELLING OUT the lessons or RESULTS of all facts and data brought before us. As many gaze at things without actually seeing them⁴²¹, so still more barely notice occurrences and conditions, but fail to APPLY them. Ferret out truth and laws from all you see. Examine every thing with a scanning, scrutinizing, searching mind. Compare one thing with another—one idea of a speaker or author with his other ideas, and detect errors if he commits them, and also discern his beauties, and what renders them beautiful. Especially criticise your own mental productions. Write⁶¹⁵, and then thoroughly revise what you have written. Scan its doctrines, but especially scrutinize the ORDER of its paragraphs and sentences. Many writers, especially those unaccustomed to composition, form correct sentences, and say many good things, yet fail in CONSECUTIVENES. Every head, paragraph, and sentence has its appropriate place relatively to all the others, where it advances the train of thought. This progression in the idea, few writers duly notice, but say in one connection what, though true and important, should have been said in some other. Comparison will find excellent discipline in thus arranging heads, paragraphs, sentences, and clauses in that consecutive order required to render the impression complete. Criticise all you read with this view, the Author in hand not excepted.

But philological criticism, or scanning words in order to see whether they are used in the best manner, or whether some other word would not have conveyed the meaning more correctly, will also be found an excellent discipline of Comparison. Language calls up words, but Comparison ASSORTS them, and chooses the one which exactly expresses the idea intended to be conveyed; and out of many words, nearly synonymous, chooses the one most appropriate. Than this verbal criticism, in connection with grammatical—also a function of this faculty—few things furnish a better exercise of critical acumen. Opportunities for its exercise are abundant; for we cannot read a line without furnishing the required subjects for criticism. The study of the natural sciences EXPERIMENTALLY, but most of all the study of HUMAN NATURE, as taught by PHRENOLOGY, PHYSIOLOGY, and PHYSIOGNOMY, furnishes still higher facilities for cultivating this faculty. Yet more of this presently. The following method of cultivating it in children, will still farther illustrate its mode of culture in ourselves.

537. ITS CULTIVATION IN CHILDREN.

The comparative, illustrative method of reasoning, is pre-eminently adapted to convey instruction to children. They comprehend principles and laws which they do not understand, much more readily when compared to something which they already know, than by all other means united. Hence, take every pains to explain, expound, illustrate, and compare, both in conveying instruction and in answering their questions. Christ taught by PARABLES, because the human mind constitutionally receives instruction through this channel more readily and effectually than through any other. This is especially true of children. Every one at all conversant with their cast of mind will bear witness how readily they comprehend comparisons, and how forcibly illustrations strike them. Through this natural channel, then, pour instruction into their opening minds. Especially teach them the inductive process of reasoning, or how to draw inferences from ranges of facts. Thus, in teaching them the great law that heat expands all bodies, take a phial or tumbler filled so full of water that another drop

will make it run over, and setting it on the stove to heat, show them that as it becomes hot it runs over, but settles down as it again becomes cool, or that heat so expands the water as to increase its bulk, and the glass so as to render its cavity smaller, which forces a portion of the water over its top. Show them that this same principle causes water to boil by expanding most what is nearest the fire, which therefore makes it rise, while that which has become cooler by contact with the air, sinks, in its turn to become heated, expanded, and again thrown up. Take a bladder partly filled with air, and let them hold it to the fire and see it swell, and carry it back and see it shrink a few times, till they see that heat expands and cold contracts air as well as water. Then explain on this principle the motion of the wind. The sun, breaking through the clouds in one place, and not in another, heats the air in the former more than in the latter, and thus swells it, so that the same amount is puffed out, and therefore relatively lighter, and is carried up by the cooler and therefore heavier air—just as a cork rises to the top of water—which rushes in to fill its place, becomes heated, and is displaced by another ingress of cooler air; and hence the perpetual motion of the wind. Let them see a blacksmith hoop a wheel. When hot, the tire is so loose as easily to slip over the wheel, upon which it contracts as it cools, and thus presses tight upon the wheel every way, and makes it solid and also adheres firmly. A few such experiments and familiar explanations will teach them the great law of things, that heat always expands and cold contracts, which they will remember forever, and around which, as a nucleus, they will gather future observations; for never afterwards would they see any exemplification of this law without associating the two together. Explain still farther that steam is only water thus greatly rarefied by heat, the expansion of which drives the piston, and this turns the machinery; but that steam returns to water when it cools, and thus becomes greatly condensed. Take other classes of facts, and apply them similarly so as to teach them still other laws, one after another, and thus keep their delighted minds on the stretch of pleasing inquiry and investigation, and ever afterwards, whenever they

see any fact coming under any one of these principles, they will associate the two together, and thus progress rapidly in their examinations into nature and her laws ; as well as form a mental HABIT of correct and ready generalization, and inductive investigation. Thus trained, they would not reject Phrenology or any other new thing till they had examined it INDUCTIVELY, and hence would never make such egregious blunders as men now sometimes commit, of believing and disbelieving without evidence.

This method of teaching can be applied with special advantage to health. Show them that such and such articles of diet make them feel thus and so ; that, as they take cold by certain exposures, become sick, and have to take bitter medicines, so similar exposures will produce similar effects. The method of teaching thus illustrated, can be carried out to any extent, both as to the mode of teaching, and the subjects taught. But take special pains to observe SIMPLICITY. Most teachers take it for granted that the pupil understands and comprehends more than he does. Goldsmith, whose mathematical powers were quite deficient, was once asked why he taught his class so well ? He replied, "Because I keep only one lesson in advance of them." We must come down to their capacities, and adapt our instruction to their limited knowledge of the subjects taught.

Comparison is located by the side of an organ which READS CHARACTER, in combination with which it is therefore designed to be exercised. Indeed, this combination furnishes one of its highest subjects of investigation. Yet the full force of this idea will be more apparent after we have analyzed

D. HUMAN NATURE.

538. DEFINITION AND LOCATION.

Discernment of CHARACTER : perception of MOTIVES : intuitive PHYSIOGNOMY : reading men instinctively from their looks, conversation, manners, walk, and other kindred signs of character.

LOCATED between Comparison and Benevolence, about where the hair begins to appear. It extends upwards as if a part of Comparison. The great rise of Shakespeare's forehead from 36 up to the hair, shows how enormously this organ was developed in his head. Accordingly, few men on earth ever possessed the power it confers in a more remarkable degree.

539. ADAPTATION AND USE.

Man was made both to manifest his own mentality, and also to take cognizance of the characters of others. But for such manifestation and cognizance, no mental operations could ever have been expressed, or interchange of ideas effected; nor could any one have known the least thing of any of his fellow men. This manifestation is effected in part by Language⁶¹⁰, yet without NATURAL language, verbal could never have been devised; natural, being the tool with which verbal was built. Verbal can be abused by uttering words of honeyed import while we feel daggers; besides being bungling compared with this natural or spontaneous communication of our mental operations. An intimate relation exists between the mentality and the physiology, and especially PHYSIOGNOMY, by which we LOOK angry, pleased, benignant, and whatever else we FEEL. Nor can we help it. To this natural language, spoken by all human beings in all ages, and even by brutes, this faculty is adapted. The latter reads the former, and thus gathers a vast amount of much needed information concerning our fellow men, even when they are only casually seen, and which can be obtained from no other quarter. Indeed, this manifestation of character by mankind, and the institution of this faculty in man, actually compel us to form some idea of the characters of all we meet, and, if duly cultivated, would enable us to read our fellow men as plainly and completely as we read print, so as infallibly to detect the cunning and the unsafe, discover talents and their various kinds, as well as amiableness, goodness, and all the other characteristics of our fellow men.

Natural language, moreover, like every thing else, has its SCIENCE⁶¹¹, and therefore imbodyes as much CERTAINTY as

mathematics. Its grand basis is that universal law that shape is as organization, and organization as character⁴³³. The walk, gesticulation, manners, dance, laugh, tones of all men—all they say and do—are full of character. These indices of the mentality Human Nature discerns, and from them forms its opinions of the character and talents. We little realize how much concerning our fellow men this faculty is perpetually telling, and how almost infinitely more it is capable of disclosing if duly cultivated and assisted by the other faculties. All human beings carry charts of their mentality and character at their mast-heads, legible, even in detail, by all who know how to read them ; which, however, few more than begin to do. Nor is any other species of knowledge more delightful or profitable ; because it teaches HUMAN nature, that highest department of nature. Nor is any other science equally vast or complex ; because man is the epitome of creation, and performs most of the functions of universal nature. Nor can any other be turned to as good a PRACTICAL account ; because it tells us whom to trust and distrust, and reveals mental and moral beauties and excellences surpassing all other forms of terrestrial beauty. Nor will any teach us more DIVINITY, because in studying “the image of God,” we of course study God himself. In short, to know HUMAN NATURE is the climax of all knowledge ; all which it is the province of this faculty, combined with Individuality and Comparison, to teach. Hence the incalculable importance of

540. ITS CULTIVATION.

No element of our nature should be more assiduously improved, because none confer a capability more useful or delightful. To effect this culture, note all that every one you meet says and does⁴³⁵. Nor notice merely, but also SCAN. Trace every word, every manifestation of character, up to that FOUNTAIN from which it gushed. Ask yourself what PROMPTED this motion, that expression, and yonder move on the checker-board of life ? Look through conduct to MOTIVE. Ferret out disposition and character wherever you go. Form your judgment of men, and then inquire of yourself from what, in them,

you deduced your conclusions? Note and spell out all the **LITTLE** things said and acted. Here especially "**STRAWS** show which way the wind blows." Little things will often put you on the track of the entire character, and tell the hidden story effectually, because done unconsciously, whereas more important acts are guarded.

An illustrative anecdote. The reader will doubtless remember that horrible murder of a bank clerk, committed in Rochester, about 1839, in order to effect a robbery. The murderer was detected as follows:—A citizen, in whom **Individuality**, **Comparison**, and **Human Nature** are very large, in passing the door of the yet unknown murderer, heard the latter order a cartman to take his trunk to the railroad depot, with an oath and a harsh, peculiar manner, which arrested his attention. His **Human Nature** and **Comparison** at once inquired what state of mind dictated the excited, imperative disposition manifested. The haste required could not have been caused by the near approach of the cars, and his whole manner indicated guilt, which suggested that this swearing youth might be the murderer. Thus reflecting, the citizen turned his steps to the depot, where he saw the luckless youth consulting stealthily and earnestly with his guilty participators in crime, which, with other confirmations of his suspicions, he communicated to the by-standers, who of course narrowly scrutinized the murderous gang. The latter, seeing themselves thus closely eyed, took fright, and in attempting to flee and hide their booty, exposed and revealed the dreadful secret. Now it was the combined activity of these two neighboring faculties which inferred, from the singular **MANNER** of the young villain, that he was guilty. This detection was effected by **TRACING OUT** a minor manifestation of mind to that state from which it sprung. All actions, all expressions, and even looks, have some **PROMPTER**; and the great secret of discerning character is first to observe all that men say and do, and then to trace every manifestation out and up to its fountain head: full directions for doing which will be found in the work already announced on "**Signs of Character.**"

FUNCTION OF CAUSALITY.

36. CAUSALITY.

541. DEFINITION AND LOCATION.

ception and application of CAUSATION : ability to distinguish FIRST PRINCIPLES and trace out the relations existing between CAUSES AND EFFECTS : desire to know the WHY AND WHEREFORE of things, and investigate their LAWS : ability to proceed from causes down to effects, and effects up to causes ; WHEREFORE AND WHEREFORE faculty : ability to adapt means to ends ; to plan, contrive, invent, create resources, to power advantageously ; make the head save the hands ; to shoot birds with one stone ; predict the results of given causes, and the like.

LOCATED at the outer portions of the upper part of the forehead. When amply developed, it widens and expands the upper portion of the forehead, or causes it to project forward and project over as in the accompanying engravings of Tyndall and Blake.

CAUSALITY VERY LARGE.



23. TYNDALL.



No. 24. LOCKE.

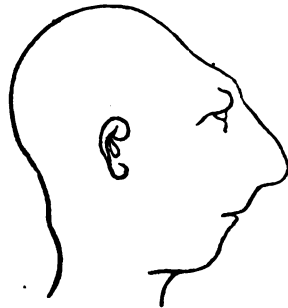
It is also very large in the accompanying engraving of Bacon, but small in that of an idiot.

CAUSALITY VERY LARGE

CAUSALITY SMALL.



No. 25. BACON.



No. 26. IDIOT.

It is large in Herschel, as seen in the expanse of his forehead, and the prominences at this point; but retreats in Burritt. In Franklin this organ was immensely developed⁴¹⁷, and his talents form an excellent sample of the cast of mind it imparts.

542. ADPTATION AND OFFICE.

CAUSATION reigns supreme throughout nature. Our world is made up of antecedents and consequents—of causes and effects. Every effect must have its specific cause, and every cause produces its own effects. LIKE causes also produce like effects. UNIFORMITY and LAW govern everything⁶. Without this arrangement, all would be zig-zag CHANCE. Man could rely on nothing, could effect nothing, and therefore enjoy nothing⁶. But this arrangement brings order out of chaos, and throws immutable CAUSATION around all the works of the great CAUSE of all causes. Or with this arrangement in nature but without this faculty adapted to it in man, causation would be a sealed book to him, because he could no more discern or apply them than a blind man colors. But with this element of causation pervading nature, and this mental faculty enabling him to perceive and apply the laws of nature, he can accomplish innumerable ends otherwise unattainable, procure innumerable comforts otherwise beyond his reach, and even force the very elements into his service. He can likewise penetrate the hidden operations of nature, ascertain their fountain head and procuring causes; apply causes to the promotion of personal and general enjoyment; and, aided by his moral faculties, even comprehend those MORAL laws which govern the world of mind. This faculty searches after CAUSES and desires to know WHY—a function as natural as breathing itself.

543. LARGE AND SMALL.

The intellectual cast and characters of Bacon, Franklin, Tyndall, Locke, Herschel, Kant, and kindred minds, furnish practical samples of the powers its ample development confers. Its distinctive office is to DISCERN AND APPLY CAUSATION. All application of ways and means to ends, and all perception of the instrumentalities by which ends are effected, depend upon this faculty. Its full development, therefore, readily sees by what means given ends can be best accomplished; suggests expedients; creates resources; judges which of the plans proposed is the best; loves to contrive and lay plans; requires

and is always ready to give its REASON ; accomplishes much with limited means ; sees how to apply power most advantageously ; makes the head save the hands ; desires to know the WHY AND WHEREFORE ; gives ability to reason, infer, invent, contrive, take advantage of circumstances, and predict results ; takes comprehensive views of subjects ; gives strength and power of intellect, and solidity and originality of mind ; comes to correct conclusions ; and says and does what makes an impression.

SMALL Causality is defective in these and kindred respects ; devises merely temporary expedients instead of laying long-headed plans ; lacks scope of intellect and range of mind ; has few thoughts, and those only common-place ; takes contracted views of subjects ; lacks judgment ; requires to be SHOWN HOW ; lacks foresight, head-work, and sagacity ; neither appreciates nor perceives the beauties of causation ; and is limited in understanding, more and more the smaller this organ. But man's

544. DEFICIENCY OF REASON

Is well nigh as great as this faculty is useful, and even indispensable, in all the affairs of life. How destitute of wisdom the great mass of mankind ! What mental blindness, almost imbecility, characterizes much that is said and done around us ! What stulticity in the choice of objects of pursuit, as well as modes of their prosecution ! How few IDEAS men possess ! What paucity of thought ! Man may indeed boast of possessing reason ; yet, alas, how little he uses this noble, god-like element. This which should stand at the head of his nature, and guide and govern his entire conduct, is thrust, alas, into the back-ground. Its voice is stifled amid the din and roar of passion. Its warnings are unheeded, and its guidance refused. When I behold such a dearth of reason—see such utter folly characterize the opinions and conduct of most of my fellow men, both as individuals and masses—my soul sinks with discouragement at the low state of still degraded humanity ! Yet I console myself by reflecting that man IMPROVES—that foolish as men now are, they have been

worse, and are becoming better. Indeed, till within fifty years, almost twenty, the grand idea, so perfectly apparent throughout all nature, that causation reigns supreme, has just begun to be generally perceived and admitted. Yet even this great truth of the supremacy of causation, palpable as it is, is still practically denied in the matter of health and sickness, which many ascribe to Providence, instead of regarding it as a consequence of violated law, and in many kindred matters.

The great mass of mankind also get their thinking done by PROXY. Political leaders do up the most of the political thinking—what little is done—of mankind, and can ride into power on any hobby, however unreasonable, they please to mount. Oh! I tremble for my country—for REPUBLICANISM, that glorious birthright of humanity—when I see how voters go for their PARTY—that is, let their LEADERS virtually do their voting. Behold the growing and fearful prevalence of demagogueism! Every vote should be a deposit of an IDEA. Now nine votes in every ten are a party ticket, which unprincipled leaders control at pleasure. How few think in politics!

Religious leaders also do most of the religious thinking of mankind. Why, the very summary of all the articles of faith of one of the most numerous religious bodies in Christendom, is that they are incapable of forming their own opinions, and must take them already formed for them by antiquity and their "infallible church." The very act of pinning faith on "the church," or "the general assembly," or "the general conference," or "the articles of faith," is a virtual surrender of independent thinking; and the fact that men follow their sectarian leaders thus blindly is proof positive of their own feebleness of reason, at least in religious matters. If men thought for themselves, would these religious differences exist? This very sectarian diversity presupposes error, which, if men did their OWN religious thinking, they would perceive and abandon.

The fashionable world too—does it think? As well "look for a needle in a hay mow," as for a thought among our exquisites. The business world thinks on MONEY matters, but

this is not thought proper. They are shrewd indeed, in scraping up almighty dollars, but reason proper searches out the great principles of NATURE, and investigates those fundamental laws of things, on the observance of which human happiness depends.

Now deduct the business world, the fashionable world, the religious world, and the political world from the whole world, and then subtract from this balance the ignorant and debased who do not even essay to think at all, and what a miserable moiety remains? This barrenness of reason allows designing men, by flattering the prejudices and pandering to the passions of the masses, to convert the latter into mere dupes and suppliant tools by which to accomplish selfish and wicked purposes; enables the few to control the many; starves those who live by their intellects but showers honors and fortunes on those who live by feeding the propensities of mankind; renders polite conversation perfectly nonsensical; rates riches higher than talents; and renders man so much a creature of intellect, and so little of true sense. Oh! when will men learn to think? When govern their opinions and conduct by the principles of true philosophy? When leave these petty trifles, and place MANLY THOUGHT at the helm of both public affairs and private opinion and conduct? When their

545. CULTIVATION OF CAUSALITY

Is commensurate with its immense importance. This poverty of reason is not nature's fault. She has provided amply for its abundant and required ascendancy—. Has the reader never observed the fine, high, expanded foreheads of children, and admired those noble developments so often seen at the sides of their upper portion? Cast your eyes over a hundred children, and then over a hundred adults, and behold with pain the marked superiority of the former over the latter! Yet the reasoning organs are the last by nature to be developed, and, if the order of nature were carried out, would grow LARGER relatively, instead of smaller.

PROGRESSION, not decline, is her motto. Finely developed as are the foreheads of most children, those of adults might

and should be, relatively, still larger. I do not hesitate to declare it as my decided conviction, gathered from that general observation of both induced by my profession, that children generally have from one-fourth to one-third better intellectual lobes, relatively, than adults; whereas, this relative difference SHOULD be in favor of ADULTS.

The intellectual CAPABILITIES of children are also, relatively, superior to those of adults. Observe their remarks. How pithy, and full of appropriateness and meaning? And how often they detect and expose, by some quaint remark, the absurdity of some of the dogmas often taught them? Do they not evince a quickness, sagacity, penetration, and intuitive perception of things, rarely observed in them when grown up? And are not their contrivances of ways and means for accomplishing ends, often extraordinary? A girl of only eighteen months old, praised her aunt as a means of obtaining candies, and other favors. So common became this practice of working round upon the blind side of the aunt by adulation, that when she praised her aunt, the latter would ask her what she wanted? When a little over two years old, waking up one evening, she found the company eating almonds and raisins. Knowing that to ask father, mother, or aunt for them was useless, she went to her uncle, whom she did not like any too well, and laying her head back affectionately upon his lap, began, in a very coaxing manner, to call him "pretty," "good," and the like. When asked, the next morning, what made her uncle pretty, she replied, "because almonds and raisins is pretty." To thus administer praise at this early age, as a means of obtaining favors, evinces a deep and well laid PLAN for effecting desired ends, and discovers an amount of Causality rarely supposed to exist in children, but which doubtless most readers have seen equalled. For the correctness of this declaration, that both the reflective ORGANS AND FACULTIES of children exceed those of adults, I appeal to universal observation and experience, even though nature ordains their relative INCREASE as age advances.

Now WHY this decline? What is its CAUSE? INACTION. Because juvenile intellect is shut up in the school-house, and

pinned fast to the bench, and stifled by parental inability or refusal to feed their inquiring minds! Their brains become withered, and then stagnate over the studies they are required to pursue; and their being whipped to school, and chastised at school, engenders a dislike of the teacher and a hatred of books, which results in mental vacuity, and consequent decline. Phrenology unequivocally condemns the present system of training the juvenile mind, as not adapted to it, and calculated to deaden instead of developing its energies. Of this our entire work has given ample proof. Our imperfect system of juvenile education mainly causes this poverty of intellect. The former does not CULTIVATE the latter, and hence this lamentable decline of man's crowning capability. Causality is literally STARVED, not only during childhood, but adolescence, and even through life. How, then, can this poverty of intellect be obviated, and its long array of direful ills be supplanted by all the blessings conferred by fully developed and well directed intellect? One means is by

546. ANSWERING THE QUESTIONS OF CHILDREN.

They ask a perpetual string of questions. Of their what-what questions mention has already been made ⁴³⁰, to answer which is to pour a perpetual stream of instruction into their opening minds. But they also ask innumerable WHY AND WHEREFORE questions, which, properly answered, will render any child well educated, though ignorant of even his letters. When some five or six years old, I asked my father, who was husking corn, why the rows on an ear I picked up were crooked, while those on the others were straight? "Because it was not rowed," was his answer. Over this reply I thought long and much, wondering what he could mean by its not being rowed, till I finally came to the conclusion, that as I had seen him go through the cornfields to hoe the corn, so also he went through to row it, but skipped this ear. Behold how excellent an opportunity was thus afforded him for teaching me the great law of things that nature always puts the greatest possible amount of function into the smallest possible space—that the cylindrical form of the cob allows more corn to grow

on a given size than if it were in any other shape, besides allowing every kernel to draw from it the required nourishment; that the kernels were placed in rows in order to completely fill up the entire space; whereas unless in rows, some would be too much crowded, while on other parts there would be none. He might then have proceeded to illustrate this law by other samples⁴⁸⁷, and finally by the human body, so arranged as not to leave any unoccupied space, but to be completely filled up with organs, and concentrating the greatest possible amount of function in the smallest possible space. The continual string of questions asked by children, provided you will allow it, furnishes perpetual opportunities for explaining some important truth, or teaching some valuable lesson. And yet, strange to relate, many parents actually become angry at them for asking questions, and interdict this best of all means of acquiring instruction. An unusually inquisitive, that is, uncommonly smart child, once asked her grandmother what brick was made out of; and when answered, asked what made them RED? The reply she received was, "O do hold your tongue. You're troubled with a noise in your head. Don't ask so many questions, and no one will know you are a fool: Girls should be SEEN, not heard." The grandmother could not tell why, and therefore became angry at the child for having asked.

Answering the questions of children is as essential to their intellectual growth as food is to that of their bodies, or roots are to that of the plant. And yet, our present educational system discourages instead of answering them. What questions do or can children ask at school? Yet would not answering their questions convey instruction and develop mind far more effectually than learning to read? Would it not excite ten times more intellectual ACTION, and thus proportionably promote MENTAL DISCIPLINE? Let them be even encouraged to ask all the questions they think of; and let not parents or teachers bluff them off with shuffling answers. Give them the TRUE explanation, or else tell them you do not know. And if you can couple your answers by a familiar illustration, all the better⁴⁸⁷. An inquisitive girl, seeing a foun-

tain in operation, asked what made the water rush up so fast and then come down? Her father, on returning home, took a long hollow tube which had an angle in it, and pouring water in at the top, showed how the water of the fountain was forced upwards by the pressure of water in a high reservoir, running in pipes under ground. Parents should also educate THEMSELVES in order to educate their children, and should rely on HOME instruction, not on hired teachers. Still another method of developing juvenile intellect, is by

547. TEACHING CHILDREN TO THINK FOR THEMSELVES.

They are too often taught to BELIEVE instead of to think; or else are taught to think from erroneous data, by which their Causality is warped from the very first. Teach them to do their own thinking. Give them correct starting points, and then let them investigate and judge for themselves. Fear not that they will come to wrong conclusions; because Causality, in common with all the other intellectual faculties, acts by INTUITION. "It whistles itself²⁸." Unbiassed, it will always draw CORRECT conclusions. That same intuition which teaches them to see, keep their balance, and even to eat and breathe, governs all their faculties, Causality of course included. All that Causality requires in order to come to correct conclusions is right DATA. Do their thinking for them while they are children, and they will get it done by others when older, and can be led blindfold in politics, literature, religion, every thing.

Children should also be taught, as far as may be, to answer their own questions. They were told something yesterday, which virtually answers a question asked to-day. Recall these answers, and tell them to put different matters and things together, and form their own judgments. Are not these educational directions in perfect keeping with common sense and the laws of mind? Do they not account for the decline of intellect already deplored and show how it can be remedied²⁴? The human mind, if started on its intellectual career in harmony with those mental laws pointed out in this work, would not flag before its powers began to expand, but starting on

high ground, would rise higher in its intellectual acquisitions and capabilities every day of life.

548. CULTIVATION OF CAUSALITY IN OURSELVES.

But, notwithstanding the palsy influence of education on juvenile investigation, the cause-seeking and cause-applying powers might and could regain the vantage ground thus lost, and still become active and powerful. Between the fifteenth and twentieth years, this disposition to think and investigate receives a new quickening, coupled with a vast accession of power. All who look back to this period will bear experimental witness, that between these ages, they began to think, investigate, inquire into the nature of things, search out causes, and take expanded views of subjects—that their minds began to experience the ripening influence of their augmented physical energies. But by this time their labor began to be of value, and intellectual culture must be subjected to worldly pursuits. They must leave school, and become an operative, or if wealthy, play “blind buff” with the foolish fashions. Soon after, love asserts its dominion, the cares of the family soon follow, and all combined, rob intellect of that cultivation so indispensable to its growth.

But the remedy of these evils. Of the evils themselves, all are experimentally conscious. How can they be obviated? By THINKING, and STUDYING CAUSES. To develop any faculty, it must be EXERCISED. To promote the required spontaneous action, present its appropriate food or stimulus, namely, CAUSATION. Investigate the MEANS employed by nature to effect her ends. All creation is one grand theatre of universal causation⁶⁴⁸. They often overlap each other, and are involved within, or adapted to each other. From the most elementary to the most complicated, behold the infinitude of their number and variety. No function of inert or organised matter, or of the immortal mind, but they effect. Nature’s universal motto is a cause for every effect, an instrumentality for every operation. How vast her doings! As countless her means! Now behold the number of causes or means she employs, apparent to our vision. Apparent? Rather THRUST upon our cognizance⁶⁴⁹.

Air, earth, water, thronged throughout with unending causation. Can the sands of the sea-shore be numbered? Yet every one of these has its causes, and in turn becomes a cause. Who can count the leaves of the forest? Every one is caused and governed by a variety of laws. Nor sand, and leaf, and plant, merely, but earth herself—a mere atom in that infinite range of causation which originates with the eternal Cause of all causes, and extends to the farthest and the smallest atom of the universe—is both an immense effect and cause. Behold it hurled through illimitable space, as if a mere feather. An arrow, shot from its Indian bow, with however much precision and force—how insignificant, compared to this mighty ball, swung through mid heaven, as if the smallest and lightest thing in creation. Behold the unerring return of the silvery moon, itself a huge mass, but the lightest of the light in the hands of this almighty causation. The sun and stars—so vast, so far removed that mortal mind can form no adequate conception of either—yet all tost with unerring precision, and hurled swifter than lightning along their annual and periodical cycles. And these all united only a little segment of that vast belt of suns and worlds, governed by Infinite Causation, as if an atom merely. And every one of this universe of worlds, doubtless thronged throughout with plant and animal, each an epitome of infinite causation. Oh! the myriads of causes and effects in perpetual progress from “everlasting to everlasting,” throughout the infinitude of God’s works! Their stupendous power hurls a universe of worlds, from age to age, with that same perfection and ease with which it descends to the merest trifles of creation. All, all is effected by causation. Verily, the range of causes and effects opened to our investigation and admiration, is indeed INFINITE!

But we need not go out of ourselves for subject-matter with which to feed this delighted faculty. Every motion of every limb is effected by some INSTRUMENTALITY, and so is every animal, every mental function of our complicated nature. Behold the perfection of our motions, of all our functions, and in view of them who can help exclaiming, Oh! the wonders of Infinite Causation! Not a muscle is wanted but is supplied,

and exactly fitted to perform its required office. Not a bone, not a nerve omitted. The entire body crowded with organs which become the causes of required operations. Of this the eye is often chosen as a sample ; but, perfect as it is, nearly or quite every part of the body is an equally perfect example of the perfection of that causation which crowds every portion of the body—every department of nature !

But all this—vast, mighty, infinite in its greatness as well as minuteness—is nevertheless as a drop in the bucket of Divine Causation. To toss huge worlds throughout space as if the merest foot-balls—what is all this compared with that almost infinitely higher order of causality which unites mind to matter, and governs all its operations ? The human mind, however vast its powers, can penetrate no farther into this boundless series of causes and effects than a fly can see into the philosophy of this mundane sphere. Verily, “ what is man that thou art mindful of him ? ”

Behold, then, O mortal, that “ feast of reason ” spread thus lavishly before you, literally thrust upon thy perpetual cognizance ! And wilt thou shut thine eyes ? Worlds of beauty are strown around all within thee, and yet thine eyes are hermetically sealed against them. Or, rather, the “ almighty dollar,” and that perhaps only brass, held so closely to thy optics as to shut out this splendid galaxy of beauty and divinity. Boast not of thy possession of wisdom, O human son of folly, till thou hast searched out some of these “ ways ” of a wonder-working God ! Is it wise thus to toil for mere vanities to the almost total neglect of such a prize as the reward of cultivating Causality ? Eternity itself will be too short in which to study out all this array of causation, though pursued with the mental optics of angels. Then shall we not begin such study in this life ? Nor will probably any one thing contribute more to the joys of heaven than this study of causation. Shall it not then be commenced in this life ? Shall we not train ourselves here for this leading occupation and repast of eternity⁴⁹⁸ ? Shall we fool away our probation on mere worldly occupations, on getting something to eat, wear, and use of a temporary nature—in satisfying ARTIFICIAL wants⁴⁹⁹.

to the neglect of the delights and the advantages of studying these inimitable causations of nature? We could have had no just cause of complaint in case God had shut our eyes upon them, because the poor use we make of them shows how little we deserve such a mental and moral repast. But as he has so graciously bestowed upon us this gift of angels, and thus given us mental optics by which to discover these relations of causes and effects⁴⁴², shall we not assiduously improve them. Can we derive more pleasure in any other pursuit? Better live on the simplest fare, and take no heed to the fripperies required by silly fashion, and thus save time to cultivate so glorious a gift. Is it possible to do any thing more important⁴⁴³? Anything, which, when done will contribute more to our happiness? Yet those who cannot spare time from the fashionable world, or the politico-squabble world, or the invincible-dollar world, or the idle world, or the tom-foolery world, to study this highest subject of human research, must go down to their graves in mental darkness.

549. EXHORTATION TO YOUTH.

Ho youth! one and all, stand up for admonition. You have your intellectual characters yet mainly to form. A long life—if you obey the laws of health—is opening before you. You are soon to choose PRACTICALLY how you will spend it. I say “practically,” because your mental habits will soon become fixed and rigid. Hence, if you would pursue this Divine Causation at any period of life, commence now. Not a day is to be lost. The mental occupations of every day go to shape those of the next, and these two to form those of the third. Would to God I could have been impressed, while young, with the doctrines of this volume—of this paragraph. Would to God I had EARLY acquired that love of the study of nature which I now find so enchanting. This love of natural facts and laws how few of us acquire! God deliver you from the consequent imperfections and sins, by implanting in your yet plastic minds a love of science—of nature’s rules and operations. Oh! let no day pass without your ascertaining one or more of these instrumentalities which she employs in effecting

her ends. Open your eyes upon her boundless system of ways and means, and keep them open through life. Think perpetually when at work. Meditate on all you see and know. Make vigorous and perpetual search into the causes, connections, and dependancies of things. Wherever you go, whatever you do, when you see any thing you do not fully comprehend, in nature or art, ferret out its cause, and contemplate its various bearings and relations. Never be ashamed to expose your ignorance if you can thereby gain knowledge. Lay those who know more than yourself about particular matters, under contribution, till you have gained from them what they know, and by pursuing this course with several, you may know as much as they all.

A deceased friend of the Author pursued this course. Coming across a writing master whose system of chirography was truly excellent, he followed him till he had learned all his teacher could show him, and then added that PRACTICE which rendered him a superior penman. He fell in with a grammarian who had some new and excellent views of grammar. He followed up both teacher and system, till he became an adept, and published a work on this subject unsurpassed by any predecessor or contemporary. He was introduced to the Author for phrenological examination, and saw that there was truth and excellence in Phrenology, and accordingly followed up this science till he became expert in this matter also. His motto was to learn all which any one could teach or tell him. He was not impertinent, but earnest and persevering. The experienced love to teach those less informed. You can make it a great PLEASURE for all you meet to communicate all they know, and then starting on this advanced ground, you can prosecute this matter till you become wiser than all your teachers put together. You can be modest, yet interested to learn; and this interest will always secure you willing teachers in abundance. The great error of youth is supposing they already know it all. No surer sign of ignorance exists than a conceited idea of great attainments. The more we know the less we THINK we know. This is so the world over. Show me the youth who boasts how much he knows, and I

will show you one who tells how little he knows. Learning humbles. Many years of hard study barely suffice to teach conceited mortals that they know and never can know but very little. The more I know of Phrenology and the nature of man, the more I see how much there remains to be learned. I repeat, plead ignorance wherever you can learn. And be diligent in acquiring knowledge, because when you have employed all your time to the best advantage, you are yet the merest novice in a knowledge of the laws and operations of nature.

550. STUDY THROUGH LIFE.

Especially, do not consider your learning days over when you go to some regular business, or marry, and have gathered a family around you. No one is too old to learn. Preserve health, and you can learn faster after thirty, and even fifty, than before. I learn faster and more easily now than at any former period. I know, indeed, that the brains of most persons become sluggish, almost addled, by thirty, as far as love of study is concerned; and all for want of use. Brain, unexercised, becomes lazy. Study is irksome to those who study but little. Not so when the brain is exercised habitually. As with the body, so with the brain; use gives suppleness, elasticity, energy. Begin some new business. At first you are slow, awkward, and inaccurate; but practice gives dexterity, nimbleness, slight of hand, rapidity, and correctness. So with brain. Then keep this instrument of the mind limber by exercise. And by DAILY exercise. Will one meal last you a week? Nor should one intellectual repast. EVERY HUMAN BEING SHOULD STUDY DAILY. It requires HABITUAL study to acquire and retain mental discipline. Men MAKE PROVISION for board—for physical provender—then why not for mental. They should no more think of doing without the latter than the former. No more? Not as much, because mind is the great function of humanity¹⁹, so that its daily cultivation becomes even more important than our daily food. I would not, as do some students, starve the body in the pursuit of study. This, indeed, is "killing the goose that lays the golden egg." But feed the body only as the MEANS of invigorating the mind. I

neglect neither, because then the other suffers ¹⁵¹⁶, but I would eat in ORDER to study, and study just as much, just as uniformly, as eat. But ALL eat and no study—no wonder that man is so poverty struck in intellect ¹⁰⁰¹⁰¹. Young man, young woman, let me beseech thee, let me implore thee, and even adjure thee, to take time, EVERY DAY OF LIFE, in which to CULTIVATE INTELLECT.

551. MAKING TIME FOR STUDY.

"But I've no TIME for study," say most worldlings in answer to this requisition for daily, habitual study. This is your answer: "Do that first which is most important" ¹⁰². Mind stands at the head of our nature ¹⁰. Hence, its improvement should take the PRECEDENCE. It should not give way to other pursuits but all others to this, and merged in it—. This is perfectly conclusive. Then give it that precedence. Make mental culture your paramount business, and worldly matters incidental, just as you now make other things primary and this secondary. Live to study: not to get rich, not to observe appearances, not even to support family as families are now supported, that is, in making a good appearance. Thus, your family could be dressed just as COMFORTABLY as now with half the money and half the stitches now required; and thus of many other things. A few items.

You drink tea and coffee. They injure all who drink—. They often cause sickness and consequent expense and loss of time, and always and necessarily impair mental and physical efficiency, and thus squander time—only a means of accomplishing. But this aside, we waste our time in earning the money with which to purchase them; waste time in their preparation; waste time in setting on and clearing off the tea set; and in the summer, time and fuel in building fires not otherwise needed. Discontinue their use, and you save one hour each day to every member of your family, of the Union, for mental culture.

Do you take tobacco? It costs you you know how much. Now, if to save a penny leaves you richer than to earn two pence, and this is true—is in fact better than to make four—

of course the five or ten dollars a year saved by its discontinuance is as good as ten or twenty, or more earned. Now put this annual amount out at compound interest for twenty years, and you have a handsome dependance, an actual living. Or save the TIME required to earn this amount annually and devote it to study, and what facilities it affords for mental culture? Bear in mind, every quid you put into your mouth, that you are eating up TIME otherwise at the service of your MIND. Now choose between the two. Rob your mind if you will eat this filthy health-destroying stuff, but do not complain that you have no TIME for study. This is even more true of smoking, and proportionally true of snuffing. Or you spend a great amount of time at the toilet of fashion and genteel dress. But of this in volume two.

Or you expend a far greater amount on your palate than nature requires. Set down to a plain meal of bread and apples—. You will enjoy it better than Vitellius did his thirty thousand different kinds of game at a meal. And this will not keep your wife drudging, half suffocated with the burnt smoke of the greasy kitchen, but give her time to cultivate her intellect in order to educate her children⁵⁹⁶. But of this elsewhere.

"But my business crowds me." Then do less business, or else do up in half the day what business you now do in all day, and devote to your intellects that part now sauntered away in waiting for customers. The great error of business men is this. They drive their business to make money, and then squander this money on fripperies and artificial wants. Make less, and then spend what you do make on necessities. You pass a confectionary. In goes your hand into your pocket for a shilling's worth of cakes, candies, creams, and trash which feeds an already morbid appetite, overloads and deranges your stomach, and paralyzes your mind. Remember, here are two destructions of time at one blow: the one, of the time spent in earning the money expended, and the other in its rendering you dull, feverish, and inefficient in mind and body, the last by far the greatest item. It even shortens life⁵⁹⁷—a still greater waste. Now save these three

items of time, and add them to that saved from tea, coffee, to bacco, and the table, or else do not complain for want of time for mental culture. Or you pass an apple and nut stand, and spend three cents for one and six for the other, only still further to derange both stomach and brain. Men lavish time on their backs and palates, but think themselves too poor to give time to their intellects. While lecturing in New Bedford, in 1844, a young man came in to beg tickets for our lectures, alleging that he was too poor to afford them, though they were only six cents, yet anxious to attend the lectures. My brother asked him how many cigars he smoked per day, he then having one in his hand. "About eight," was the answer, for which he paid more than double the amount required for admission. After a good schooling the tickets were given him.

But worse than all, we IDLE away a vast amount of time ⁴⁴. Now, reader, taking the preceding train of remarks as samples of the ruinous, wicked waste of time perpetrated by all mankind, just arraign yourself before the bar of your own conscience, and calling memory to witness, try your own self for this misdemeanor, and sentence yourself to a rigid economy of time, for the EXPRESS purpose of cultivating intellect. It is computed that if all would curtail extravagances, and labor four hours per day, man would live in clover, as far as his natural wants are concerned. But set aside this estimate, if you will, and consider this subject in the light of nature's requisitions. She requires that intellect should predominate. This can be secured only by CULTURE. Does she then really refuse time for the required mental improvement? For whatever she requires she makes ample provision. Has she taken such unwearied pains to put so vast a range of earthly blessings within our reach, so that we have only to pluck and eat, and has she denied us this greatest blessing of all—time for STUDY? Let us not fault nature but OUR OWN NEGLIGENT SELVES. She never meant that we should give all our time excepting a mere moiety to our bodies; but that we should give the greatest part to our mentality and the dribblets to our bodies, except when the same time serves both. She meant that every human soul should study at least half of every day of

life. This will improve health and even prolong life, both of which the admixture of labor and study tends to promote—. Oh! man, how foolishly dost thou squander thy precious time.

Another vast saving of time can be secured by increasing OUR EFFICIENCY. Thus, when we accomplish as much in an hour at one time, as in a day at others, or in a given day as in ten others, we live as much in proportion. Now by a proper regimen and observance of the conditions of health, all of us can augment our mental efficiency ten-fold at least; and thus in a single hour daily, perform an immense amount of mental labor every year. The USE of time is more than its amount. Keep your bodies in a state calculated to facilitate mental action, and three or four hours of hard study will be amply sufficient, with what time for reflection allowed while prosecuting your daily avocations. Certainly, none are so poor that they cannot find at least ONE hour daily for mental luxury and discipline. If no other time offers, take evenings. Not that I recommend night study; it is injurious, except when the system is starved for mental action. The order of nature is this: While the natural sun pours his delighted rays upon the recipient world, let your thoughts be poured out upon the fields of nature, to be gathered in and strengthened by exercise, as he descends the evening sky. Rise with the sun or with the dawn of day; nerve your mind gradually to action, as he increases his light and warmth by slow degrees; commence your mental labors by greeting and admiring his first rays; think, labor, study, moralize while he shines, and by the time he disappears at night, you should have exhausted your physical and cerebral energy for the day, and be ready, after that recreation and relaxation so natural in the evening twilight, and so promotive of rest, to seek that rest which shall supply you with energy for renewed labors, or rather pleasures, when he again greets the dawning east.

Still, if you really cannot save or make time for intellectual culture during the day, yet take it in the evening rather than not at all. Long winter evenings will give the laborer time for study—so will his allowed hour after dinner, in the summer—

a bad time to study, however, if you over-eat, but not without. God never made the stomach and brain to conflict.

Still, far be it from me to sanction this modern effort to turn night into day, by sitting up till midnight, and sleeping after sunrise. The good old Yankee custom of retiring at nine and rising early, is in keeping with nature's inflexible ordinances. All children should be habituated ^{488 490} to retiring with the sun, and rising early; and most lectures, meetings, and the like, should be held in the day time, instead of evening, when we are exhausted. Why give mind the mere drippings of the day, and that only sparingly?

But be your business what it may, you can find time for thought every day, every working hour. While your hands are employed in manual labor, employ your mind also in mental. Labor and meditation are not incompatible with each other. Indeed, the former actually FACILITATES the latter, by promoting circulation, and thus augmenting cerebral energy. I never "enjoy my mind" more, am never more delighted with those new thoughts which result from meditation, than while at labor. Work should never be so hard as to be irksome, but only pleasurable, and thus prosecuted, will actually allow you to do more, and also to inquire into the operations of nature. Farmers especially should be students, and I rejoice in the growing attention they are paying to mental culture as agri-culture. The

552. FACILITIES FOR STUDY,

However, are every way inferior, whereas they ought to abound. Books should be multiplied a thousand fold, till they become the great commodity of traffic and commerce ⁵¹⁵. But most of all, they require to be IMPROVED. Trashy novels require to be superseded by works full of sound sense, excellent instruction, and scientific knowledge. Yet they should not be dry and plodding, but filled, not merely with all that halo of beauty which clusters around every right exhibition of the works of nature—because around the works themselves—but with all the elegance of diction and charms of style which appertain to language. A clumsy or insipid style in a scien-

tific work, is like rags on the goddess of beauty. How pre-eminently does the subject allow and require all the excellences and ornaments of style so abundant in the very nature of language⁴¹⁷. Every child's school book should equal Irving's "Sketch Book," for felicity of diction. Dress up all the inherent beauty of nature in all the charms of a truly splendid style—blend the useful with the rich—and such books as mortal eyes never yet beheld, would render reading far more enchanting than the ball room⁴⁹⁹ note

553. PUBLIC LIBRARIES.

These books, thus splendid in composition, should be accessible to all. Private libraries are eminently useful, but public vastly more so. The poor require reading material equally with the rich. Let it be furnished, and crime, generally associated with ignorance, would thereby be prevented. Let government advance funds for this purpose, and they will have less requisition for jails and hangmen. As you EDUCATE THE PEOPLE you proportionally diminish crime. A hundred fold more effectual preventive this than punitive measures. In fact, unite physical and intellectual with moral raining, and you head off crimes almost altogether. If men knew the consequences of violating law, they would sin less, probably little. Public reading rooms are of course recommended as a part of public libraries; and so are circulating libraries. But we especially require FEMALE reading rooms. Women love to read, and should have equal access to this means of mental culture.

554. PUBLIC LECTURES

Will be found still more promotive of public intelligence and virtue. Let every village and neighborhood have a splendid public room, attractively arranged and fitted up, and capable of holding "all the region round about," and than let government employ and support lecturers, in part, at public expense, as it now does teachers, furnished with splendid apparatus for illustrating the respective sciences on which they lecture, and let them spend their lives in the service. Let one man have manikins and anatomical models, drawings, and preparations,

and occupy a given section, say one or more counties, which he should visit at stated intervals, so that all could hear as they are growing up. Let him teach anatomy and physiology; especially the young the value of health, means of preserving it, and causes of its destruction. Pay five dollars to this object, where hundreds are now paid to physicians for TRYING to cure, and few would be sick, and those who were would be able to doctor themselves. Strange that doctors have not enlightened the people touching the laws of health long before this. But their neglect will prove their ruin, which many of us will live to see.

Let another public lecturer be fitted out with a phrenological apparatus—drawings, paintings, animal and human casts and skulls, and whatever else will illustrate or enforce his subject, and pass around his circuit periodically, lecturing on this science of mind, and telling parents how to manage this child, govern that, and educate the other, and in what occupations they will each succeed; as well as pour fourth that perpetual stream of ADVICE which Phrenology gives in such rich abundance and personal applicability. Let him also add the MENTAL PHILOSOPHY, and the MORALS and ethics, of this science of man, so that the entire body politic shall not only be treated to that rich intellectual repast which it serves up, but become imbued with its purifying, elevating doctrines; and a powerful check would thus be given to vice, and incentives to public virtue and improvement be propounded for general emulation. Say, reader, has not this science purified your own feelings, and improved your MORALS as well as intellects? It will do this for all.

Kindred lecturers should be employed and fitted out with abundant apparatus for illustrating chemistry, natural history, geology, chronology, natural philosophy, mathematics, astronomy, and every other department of science and nature. The expense would not be great, and would save a hundred fold in the cost of the criminal calendar alone.

These lectures should be especially adapted to the juvenile mind; yet what is well adapted to the young, is therefore adapted to adults.

I would not, however, recommend every mountebank because he can be hired for twelve dollars per month; but splendid lecturers—well informed on all scientific matters, and perfectly familiar with that on which they lecture; and instead of those who lisp, or squint, or violate both grammar and rhetoric, or deform their matter by defective delivery, I would recommend splendid orators—good-looking, noble and commanding in appearance, dignified, impressive, fluent, felicitous in style, and altogether captivating; so as to draw out all classes, especially the young, in delighted throngs, to hear them discourse learnedly and eloquently on nature and her laws, and incite in these youth an ardent desire still farther to prosecute these thrillingly interesting subjects. Think you our youth, thus educated, would throng the country carouse, the disgusting groggery, or the demoralizing theatre—those nurseries of vice?

Especially would I recommend lectures on elocution. Let children be taught to SPEAK—taught by example, and by those after whom they may safely pattern. I would make them all GOOD SPEAKERS⁵¹³.

Not that I would not recommend any local teachers. They are indispensable. But I would create a new profession—that of lecturing. By a law of mind, truth can be TALKED into mankind, especially into juveniles, which no other form of teaching can possibly convey. To this law of mind I would adapt instruction. The Persian teachers LECTURE to their scholars. This is their great method of instruction. This is right. This is the most powerful means of conveying instruction in the world⁵¹⁴. Let GOVERNMENT furnish these educational facilities.

Still, as the government is too completely pre-occupied with tweedledum and tweedledee politics, and scrambling after the spoils, to think or care for the dear people, individuals must raise subscriptions and engage good lecturers, and especially be sure to patronize those who do come among them, and are worthy of patronage. Still, public patronage is too limited to secure men of decided abilities as lecturers.

On one other subject we especially require lecturers. On

GOVERNMENT. How long shall republicanism remain demagogueism? Talk about "our rulers!" WE, THE PEOPLE, are the hereditary kings and queens of this mighty empire. But too ignorant to govern ourselves, we pay a bonus to demagogues to hoodwink and lead us by the nose wheresoever they list. I would not incur the odium of favoring a monarchy, for I love republicanism as I love my life; but give me a monarchy if we must have ignorance. No individual or nation should be allowed to govern themselves till they know how to do so. Republicanism with ignorance is rowdyism. Our nation may yet become so far enlightened as to navigate the republican bark safely upon the broad ocean of humanity; but IS NOT YET. Every administration degenerates. This we have all seen. Our politics are amazingly corrupt, and the more reckless the office seeker the more sure of success. Worth, so far from being a passport to office, is an insuperable barrier. Show me a strictly honest politician as such, and I will show you a marvel—a seven years' wonder. Washington, if now alive, would be immolated on the altar of PARTY. The rabble rule. For proof, see our license questions, even in blue-law Connecticut. In New York city the rabble have prevented the license question from being submitted to the decision of the majority—have said in the teeth of this fundamental principle of our boasted republican institutions—"the majority shall" NOT "rule." Behold a national congressman heading a Kentucky MOB—not for the purpose of obviating a nuisance, but for no other than to trample on the FREEDOM OF THE PRESS! Oh! my country! to what art thou verging! To lawless, ruffianly demagogueism—the very worst possible form of tyranny. This is TRUE, call me what you will for saying it. Your own eyes see it; and it is time those who love REPUBLICANISM, not blustering log-rolling, should rise, instruct the people, and renovate the government now while we can. I fear, and yet I hope. Give us lecturers and books on government as adapted to the nature of man, and we will avoid Scylla as we have escaped Charybdis. But glory on in the security of our freedom, and one generation will see it a mere name—"a sounding brass and a tinkling cymbal."

Our government is new, and we require to educate the people, its nominal conductors, in the affairs of state. Better give maniacs swords and firebrands, than the ignorant the helm of state. I repeat, there is no salvation but in EDUCATING THE PEOPLE. And we must be "up and doing," or the seed time will be past. Hear ye the alarm, and echo it. Organise an HONEST, ENLIGHTENED PARTY, sufficient at least to hold the balance of power, and thus control the government. Politicians are as venal as the daughters of shame. Any of them will sell soul and body together for a handful of votes. Then let us buy them in to DO RIGHT.

555. CABINETS OF NATURAL SPECIMENS

Are also required in every town and district in the land. To learn, we must first OBSERVE, and to do this, must have THINGS to look at. Museums are very good as far as they go, but are faulty in many respects—they are scarce, and conducted more to gratify a vulgar curiosity for the marvellous, than to foster science. Still, in the absence of any thing better, they are invaluable. Let all visit them often, and examine those specimens of nature's works which they contain.

But we require more, and something more complete. Every town, if not district, should have its cabinet of beasts, birds, fish, reptiles, insects, and petrifications, as common property, and to which all should delight to contribute. There are specimens enough. They only require to be COLLECTED. Yet government alone can do this effectually. Such collections should be made by means of government. Individuals can do something, yet government could easily ransack air, earth, and water—the whole globe—and bring together the productions of all climes, at a much less cost than is expended in electing one president, or supporting an inefficient army and navy for a single year. Give me twenty millions, and I will furnish every town with a splendid cabinet of animate and inanimate nature. I will place in every neighborhood a specimen of every animal and mineral of importance on the globe. In every hamlet, the sea and the dry land shall be amply represented. Every bird shall be there; the most beautiful, the

most lofty, the most homely. I will also open the bowels of the earth, and place before every inhabitant of the land representations of those animal races of former epochs now extinct, except as preserved in shape by the petrifying hand of time. Geology shall pour out her treasures, and all nature shall stand represented before all men.

To be more specific. On a recent visit to the mines at Carbondale, I saw any required quantity of that slate which overlays and underlays the coal, bearing the most delicate and perfect imprint of those vegetables by which these immense coal deposits were formed. I saw what interested and delighted me immeasurably, but more than I can take time to relate, piled up in masses throughout the mines; samples of which one hundred dollars would put in every town in the land. All required to be done is to pile them on the cars and haul them out. How great a pity that we have no organization for securing and disseminating these easily procured specimens.

When lecturing at Skaneateles, I begged a stone picked up in their lake, full of an extinct animal resembling an immense petrified grub. The lake abounds in these petrifications.* Canal boats could be loaded with them at a trifling cost, and every school district supplied. They were most abundant in those parts of the lake where gullies emptied fresh water into its bosom. Going from Watertown to Brownsville, you will see abundance of petrifications, and among the rest, of tribolites. They abound in Lockport, dug up in making excavations, and are often thrust into the cars to find purchasers among the passengers. Every mountaineer knows of some mineral deposite, where cartloads could easily be brought to light and scattered over the Union. Give me the twenty millions annually lavished on the army and navy, in times of peace, for doing almost nothing, and I will institute a vast depot, to which all who will may send a barrel or more of such specimens as are found in their vicinity, and from which receive in return an assortment of the mineralogy, geology, and animality of the GLOBE, and with which towns and clubs

* Specimens of these petrifications can be seen at 131 Nassau St. N. Y.

could effect similar exchanges on the largest scale desired. I would have birds, now shot down by thousands and thrown away, bought up, stuffed, and either sold, exchanged, or given to these public cabinets. I would set school children to collecting and labeling the mineralogical, botanical, and other specimens found in their vicinity, in order thereby to study these sciences, and to exchange the fruits of their labors for complete scientific cabinets and apparatus. The zeal and emulation in prosecuting the study of nature thus excited, can hardly be imagined; and the strong fraternal bonds thus entwined all around and throughout society, would render all most happy. By this system of mutual and governmental exchanges, I would set the whole nation—all mankind, for I would extend this arrangement also to nations—zealously at work to collect those specimens of nature's productions now going to waste in all portions of the earth, and make all enthusiastic STUDENTS OF NATURE.

Instead of employing those blustering, unprincipled politicians, now paid for their electioneering gammon by fat government offices, perquisites, and contracts, I would employ men of true scientific attainments, as well as moral worth; and search out, encourage, and bring forward deserving men, now slumbering in obscurity because they lack the brazen face required to secure governmental patronage. I would fit out exploring expeditions to still farther facilitate such collections, and let seamen know that whatever specimens of shells, animals, minerals, skulls, and the like, they might collect, would be bought by government. Think you the face of the earth would not be gleaned, and even her bowels searched, in order to obtain scientific specimens and natural rarities? I would employ competent artists to draw and engrave on steel, in the best possible manner, views of every important mountain, landscape, and city, on the globe; and then furnish cosmoramaic views, if only through convex lens, in connection with each cabinet, so that children, by looking through them, could see a perfect representation of the geography and scenery of the whole earth. What if to get up a single engraving, say of London, Niagara Falls, or Chimborazo, should cost thou-

sands of dollars; once done, it could be furnished on this immense scale at a trifling expense. This course would also save the expense of maps for individual scholars, and leave the money now spent for them to be appropriated to infinitely better advantage. Let each nation draw its own landscapes, and then interchange with each other, and supply all their school districts, with fac similes of the aspect of every picturesque and important scenery and place on earth. Teach geography by these and kindred means, and all children would long for "school time" to come, so that they might partake of another intellectual feast, instead of playing truant, or having to be whipped to school. I would also furnish a magnificent globe to every school district, if not family, having RAISED representations of mountains and cities, the mountainous framework of the earth^{as} included, and depressed imitations of valleys, lakes, and seas. What if to get the first one just right should cost a hundred thousand dollars, or more; they could even then, by being furnished on the immense scale then required, be afforded at a mere trifle, and without any expense to government except the loan with which to commence. I would get up geographical gardens at the great central points of our Union, of many acres, representing the mountains, streams, lakes, cities, animals, and productions of all nature—the tropical of course in green-houses—so that a few days OBSERVATION would indelibly rivet on their susceptible minds a hundred fold more geographical knowledge than any one man now knows.

I would lay all nature under contribution, by way of furnishing educational facilities to every child and citizen in our land. Give the twenty millions squandered yearly on warlike preparations, and I will educate the entire population better than any college graduate is now educated, and all "without money and without price." "But you rob our country of its means of defence when you withdraw support from the army and navy," it is objected. By no means, but increase it ten-fold. The defence of the country depends not in its standing army and navy, but in the PEOPLE. What would our army and navy do by way of fighting our battles, say with England or France?

Not a tithe of what would have to be done. Did a standing army achieve our independence? No, but VOLUNTEERS. Pursue the course here pointed out, and every citizen would love his country as his life, because it loved him and his children, and would fight to desperation and death in its defence. You need not then wait for the impressing "draft," but soldiers would rush in from every valley, and mountain, and corner, eager to assert her rights. An army could thus be gathered in a week sufficient to conquer the whole WORLD, if it were arrayed against us.

556. THE TRUE ENDS OF GOVERNMENT.

Are now entirely misapprehended and neglected. They should be to furnish these and kindred EDUCATIONAL FACILITIES, instead of enacting, only to "expunge," tariffs, sub-treasures, bankrupt laws, and to charter banks, monopolies, and the like. Private expresses could transport the mail ten times as well as government, and at a quarter the expense. Leave the currency to itself, and the people will take only what is good. The tariff is "small fry" compared with public education. Criminal jurisprudence is now begun at the wrong end—is now based in fear, whereas it should be founded in love. Its motto should be, "An ounce of prevention is worth pounds of cure." Pursue the system of intellectual education urged in this volume, and of moral training pointed out in the preceding, and you banish ignorance and crime. Let government seek out and educate all poor children, and then PATRONIZE TALENTS AND WORTH, instead of demagogues, and it will elevate all above that cheating, robbing, money-grabbing rapacity which now constitutes the main-spring of crime. Would not the doctrines of these volumes, if applied in practice, reduce our criminal calendars to almost nothing, empty our prisons, and almost obviate vice? Government should be PARENTAL, instead of inexorable. Let her care for the people, and the people will love their great benefactor as they love their children, and because it cared for them. But in addition, a love of the refining and soul-purifying study of NATURE, would be inculcated, than which few things more effectually

wean from vice and promote virtue ; as will soon be shown more fully.

Now since these cabinets and scientific apparatus are indispensable to any thing like a complete system of education, and since individuals can collect only on a limited scale, GOVERNMENT should make such collections its great care. Individuals may do something. Josiah Holbrook is accomplishing a great work by way of effecting exchanges, yet we require a GENERAL depot—a common centre—to which all might contribute, and from which all obtain specimens. Government need not be saddled with any expense, only invest capital with which to start. Let her only GET UP these cabinets, globes, apparatus, books, and the like, and individuals and companies would purchase them so extensively as to pay a handsome revenue over and above expenses.

557. THE USE TO BE MADE OF THESE CABINETS

Next deserves our notice. Thus scattered over the land, so as to be accessible to all, I would have them placed in those large public lecture rooms already recommended⁶⁵⁵, to be used both by public lecturers, for the good of all, and especially by FEMALE TEACHERS. Woman is the natural tutor of children. Her nature fits her for developing their minds quite as much as for nursing their bodies. Men may teach juveniles in their teens, but females should teach them up to their thirteenth year at least ; and mothers make far better teachers than maidens, because maternal love inspires them with that interest in their advancement so essential to success—. And should teach them by TALKING to them instead of from books. Let her take a flock of these dear creatures into one of these cabinets, and give them practical lectures from these specimens. Let her take to-day the crane, and after telling them all about its habits, how and where it procures its food, builds its nest, and the like ; show how admirably it is fitted, by its long limbs, to wade in water, and stand till fish, snakes, frogs, and the like, swim along carelessly near it, so that by means of its long neck, it can dart its bill into them and thus secure its prey and feed its young. To-morrow let her take

up some other bird, and next year, the finny tribe, and the year after, butterflies and insects, and thus of the fox, deer, moose, panther, bear, elephant, tiger, rhinoceros, and lion, thus telling their pupils in turn, all about all nature, animate and inanimate.

This method of instruction would fully enlist the two most powerful teachers of the juvenile mind—the eye and ear. It would rivet their eyes and thus their intellects, in harmony with that great law of mind, that what they SEE they remember⁴⁸³. It would also employ that CONVERSATIONAL method of conveying instruction already shown to be so efficacious⁴⁸⁴. Say, reader, does not this educational system harmonize perfectly with the LAWS OF MIND? And is it not infinitely superior to this “sitting-on-a-bench” system? Would it not excite and develop mind more in one week than the present does in years? I rest these views on the COMMON SENSE of all, and plead for their general adoption. And as there is little prospect that government will furnish these facilities, cannot some system of concerted and general action be devised for carrying out this evidently correct and only effectual means of educating mind? But more of this in the Phrenological Journal.

Children should also be taught HISTORY, both local and general. Thus, in teaching them the geography of any nation or place, tell them also all that is known concerning the history, habits, modes of living, customs, laws, governments, and peculiarities of their inhabitants. This will give them enlarged views of the true nature of man. Such knowledge of the practical workings of human nature, would disclose many excellent customs and practices in savage and half-civilized life, and also expose many that are injurious, and thus lead our youth to reflect upon what habits and customs contribute most to human happiness, as well as to general reform and progression. This would furnish a most excellent discipline of Eventuality. These cabinets should also contain drawings, casts, and skulls of NATIONAL heads, so that their Phrenology could be compared with their characters. This would also show what effects different climates have on character, as well

as the effects of mountainous and level districts, and much more of a kindred nature.

Nor should these things be taught to children merely, but to adults equally. Society requires to be remodeled, so as to allow every individual to devote a portion of each day to mental culture. Let laborers be paid more wages for less work, and be allowed and induced to visit these cabinets and learn something new daily, as well as store their minds with materials for thought while at work⁵⁵⁰. Especially should woman, married and single, resort to these places of amusement and study, instead of wasting time at the toilet and over extra sewing—. Young women should thus study nature as a means of preparing themselves for those educational duties which await them when they obtain the "chief end" of woman's desire; and mothers should frequent them both to learn for the mere advantages of knowledge, and that they may teach their children, as well as for another reason still more important, which will be explained in a forthcoming work on "MATERNITY."

558. IS A COLLEGIATE EDUCATION DESIRABLE?

To this oft-repeated question the principles of this work answer—NOT AS NOW CONDUCTED. Let the lives and practice of all professional men bear witness to this decisive question: Does not a collegiate education tie graduates down with the shackles of antiquity, and thus chain society to the past, instead of "pressing forward" in the road of PROGRESSION? Few college graduates become imbued with a truly scientific spirit—an independent love of all truth—but almost all refuse to examine any new subject not found in their musty books. They make very few important discoveries. These emanate from working men mainly. As Bacon's "Principia" knocked forty years for admission into the "seats of learning," as Gallileo was imprisoned by the pseudo learned, and as Harvey's Discoveries encountered their principal opposition from these same collegiate wiseacres, so Phrenology has been opposed mainly by the professions, and admitted much more readily by the common-sense mass than by learned bigotry. The latter too often

refuse even to examine its claims, and furnish by far its most inveterate skeptics. I submit the fact to general observation, whether ministers for example—those who have been ordained without having gone through college—are not more open to conviction, less bigoted in opinion, and more ready to admit new truths, as well as more reformatory, than collegiates. Doctors, too, are behind the age, and lawyers are tied down to ancient precedents, and too often blinded by prejudice. I submit the fact whether collegiates evince that LOVE OF SCIENTIFIC TRUTH which should always characterize the student of nature.

Yet there are exceptions. Hitchcock is one. He goes for truth instead of antiquity. His mode of instruction I cannot too highly recommend. Till he assumed the presidency of Amherst College, I could not conscientiously recommend any college. Now I can. Amherst College will not thus trammel your minds or bind you, hand and foot, in the strait-jacket of antiquity. Its cabinet, apparatus, and manikin are also valuable, and its President will inspire you with a LOVE OF NATURE—the great basis of all education. I also think favorably of Oberlin, because it is not bound up in bigotry, and combines MANUAL LABOR with mental discipline—a union which the entire tenor of these volumes recommends. Manual labor institutions have my unqualified approbation. They vastly facilitate mental action by physical exercise, and thus promote mental, and therefore discipline. Nor do they hamper with antiquated dogmas.

599. ASSOCIATION—MNEMONICS.

ASSOCIATION furnishes a powerful auxiliary to memory, and one devised by nature. Thus, in seeing or even in calling to mind a place in which certain events transpired, we instinctively recall what transpired there. We naturally associate the face of a friend or enemy with what they have done, so that recalling either brings up the other also. Hence, when Eventuality, or any other faculty is weak, its practical efficiency can be greatly strengthened, by associating its function with some of the more vigorous faculties, so that their action shall call up the thing to be remembered.

Mnemonics are partially based in this associating principle, yet are too artificial—too far removed from that natural association or conjoint action of different faculties just recommended—to merit approval. They attempt to obviate the exercise of natural memory—the very thing which this entire work enjoins throughout. When art can excel nature, and human invention out-do divine, mnemonics may be of service ; but give me the memory created by God, instead of any system founded on art. As far as it TAXES natural memory, the more the better ; but the more it relieves it by obviating its requisition for action, the more it weakens. This is too plainly an inference from our whole train of doctrines to require special proof. I have studied Gouraud's system—probably the best extant—and say with emphasis that nothing would tempt me to adopt it—to substitute artificial memory for natural. As well substitute an artificial heart, or muscle, or eye for a natural one, except as far as it works WITH AND UNDER natural memory, and facilitates its EXERCISE—that great agent of all mental culture.

560. AGRICULTURE

Should also be studied. Vegetation has its laws and conditions, by fulfilling which it can be vastly augmented. The application of chemistry and science to enhancing the productiveness of the earth, is full of interest, as well as laden with practical benefits. It also facilitates that EXERCISE already shown to be indispensable to life and happiness.

The weather may also be studied with profit, and predicted with accuracy for weeks, if not seasons beforehand. Animals do this. Then why not man ? The spider anticipates its approaching changes, and shapes her web accordingly, before man discovers them. The beaver builds his hut one story higher the fall PRECEDING a wet spring. The squirrel lays in an extra supply of nuts the fall before a severe and protracted winter. Many other animals prognosticate the weather in like manner, yet this knowledge is certainly more important to man, in order that he may put in crops adapted to wet, dry cold, warm, and other prospective seasons, and sow

early or late, and plant deep or shallow, accordingly. Does a merciful God, after having done so much more for man than brute, furnish this important knowledge to animals yet deny it to their natural lord? True, the former prognosticate by instinct—only the intuitive or natural action of the faculties—yet his instinct, if duly cultivated, would be as much more keen and sure than theirs, as he is their superior; besides all the aid he can derive from his endowment of reason. The weather, like every thing else, is governed by fixed LAWS, which are within human cognizance. The equinoctial storm is a correct type of all the storms of the next six months. As it clears off, will they also clear. Abundant rain then insures a wet season, and the reverse. This storm, in September 1841, was remarkably warm, and so were all the storms for six months, and the winter was open. That of September 1844, was very windy, without much rain, a perfect prelude to those steady, sweeping northwest winds which prevailed all winter and spring. That of the March following was so slight that I failed to observe it, though on the watch for my weather-gauge for the season, and the exceedingly dry, hot summer following, formed a perfect correspondent. “Cold snaps” will be found to continue about these days—the first day cold, the second VERY severe, and the third the least so, and thus of spring and fall frosts. A similar principle doubtless governs seasons, probably eras. These weather-signs are instanced, not for their own sake as much as to show that such signs exist, and to encourage the study of this department of nature.

561. THE STUDY OF ASTRONOMY

Should also be prosecuted by both juveniles and adults. It is not so difficult or abstruse as to prevent its being generally understood by all classes. The right kind of illustrations and instruction would enable all to understand and observe its rudiments and constellations, the motions of the planetary system, its distances, and its leading facts and principles; as well as to predicate the TIME of day or night from the positions of the heavenly bodies. This many elderly people can now do, without ever having studied this subject a single hour, but

merely from desultory observation. What exalted attainments are then within our reach provided this study is begun early, prosecuted vigorously through life, and facilitated by astronomical globes, drawings, instruments, and competent teachers? Would not the study of the starry heavens also awaken thrilling emotions of the sublime and infinite? The loud pealing thunder, the forked lightning, the gorgeous drapery of the twilight sky, the pouring rain and driving hail and snow, the northern lights shining, rushing, roaring over our heads, the star spangled canopy of heaven in a cloudless night, the immensity of space stretched out above, below, and all around, are directly calculated to inspire the soul with awe and adoration of that Infinite Being who created all things. Who can contemplate these manifestations of power and infinitude without bowing "before Jehovah's awful throne," in devout homage? Than the study of "Dick's Christian Philosopher," and astronomical science generally, few things are better calculated to develop intellect, and purify and elevate the soul.

562. ANATOMY AND PHYSIOLOGY

Should also be studied by adults and taught to children. The two should never be separated from each other. The functions of all the organs, and the various ends in the animal economy they subserve, should be studied in connection with their shape, structure, and location; because each will facilitate the other. Hence the value of that great modern invention, the "manikin." It obviates all the offensiveness of the dissecting room, yet enables all to see a correct representation of all the parts and organs of the human body. It especially enables MOTHERS to learn the wonders of anatomy in order to teach them to their children. Put their fingers on your pulse, and increase their delight and astonishment by explaining the whole process of the circulation, and showing them from the manikin the heart, arteries, and veins, by which it is effected. Still farther exemplify your subject by dissecting those domestic animals slaughtered for your own use, or that of others. Ask them what becomes of the great amount of food they consume? Explain the office of the stomach, along with its shape

and position, together with the whole process of digestion and nutrition. Show them how a sour stomach is produced, viz: by eating more food than the stomach digests; the food laying on the stomach till it ferments, thus leaving the stomach acid, which by being frequently repeated finally inflames and diseases the digestive apparatus. What will delight or benefit them more than anatomical and physiological knowledge? Or what knowledge is more important than that of the laws of life and conditions of health? It will teach them to preserve health and prolong life, than which the knowledge now acquired at school is as a mere drop in the bucket. Put their fingers on the spine, and show them the working of its joints as the person bends backwards, forwards, and sideways. Explain that these motions are effected by means of muscles, which constitute the red meat of animals. Show how the joints fit in and work on to each other. Clench your fist, and show the hardness occasioned by the contraction of the muscles and stretching of the tendons; and exemplify the same by lifting, walking, chewing, and other muscular exertions. Exhibit the brain and nerves; show their structure, and explain their uses, and illustrate by showing them the brains of animals. Pursue this course with children, and when grown up, every man and woman would know ten times more about these subjects than physicians, and in consequence live twice as long and thrice as happily as now, besides enjoying uninterrupted health through life.

563. THE STUDY OF PHRENOLOGY

Also furnishes one of the very best of all means of disciplining the mind as well as elevating the moral tone and standard. Than this science of MIND, animal and human, and its organic relations, no study, no exercise of intellect, will be found equally delightful or instructive. Nothing will equally call out and rouse to their highest pitch of healthy tension, nearly every intellectual faculty. What will equally promote OBSERVATION—that great stimulant to intellectual action⁴²³? Phrenology renders all its pupils INVETERATE LOOKERS⁴²⁶. It stimulates Form to note and remember both the various shapes of

the several organs, and those forms of body and face which indicate and accompany given traits of character⁴³. It calls upon Size to measure the relative and absolute dimensions of the brain in general, and of each organ in particular. It also employs Weight in applying touch to the various organs, examining the density of the physiological structure and texture, and the like. It keeps Order busily employed in marshalling the various points of character in the order of their respective influences on the conduct, and in systematizing all observations and investigations. It calls Locality into the most vigorous action, as already seen⁴⁷. It especially requires and promotes the action and consequent discipline of Eventuality in remembering the respective functions of the various faculties and their influences on character. It also furnishes delightful and perpetual employment to Language in describing character, and in discoursing on its facts, beauties, and principles. Few things furnish more or better material for conversation, as all who have heard lectures on this science or studied it, will bear ample testimony. It requires the incessant and concentrated action of Comparison to compound the various faculties in those perpetually changing combinations in which they occur in different individuals, no two of whom are alike. The Author has graduated with more than medium honor, but never knew what it was to begin to THINK till he commenced his profession. A thousand times, while studying out the products of different combinations, it has seemed as though his brain was drawn up to a pitch of tension ready to break down, under the required pressure. Testify, ye students of this vast science, has it not often so taxed your intellectual organs as to cause pain in your forehead? And surely, if any science excites Causality by presenting the highest order of laws and subjects for investigation, Phrenology is that science. Take this very work as an example of the perpetual round of THOUGHT suggested by Phrenology. I speak not of the authorship, but of that SUBJECT MATTER furnished by this science. All phrenological works abound in thought. Take "Combe, on the Constitution of Man," as an example. In short, no other study equally delights or excites and there-

fore strengthens the intellect. It equally quickens all the other faculties, as Ideality, Veneration, Benevolence—every element of mind, yet to show wherein, would require unwarrantable digression.

But this mere stimulus to mental action it furnishes to all the faculties, great as it is, is a mere drop in the bucket of its utility. Those great LESSONS IN HUMANITY which it teaches constitute its crowning excellence. How it exalts and expands the mind! How it unravels the whole web of the human constitution! It develops those laws in harmony with which God created mind—this highest effort of Divine power. It unlocks and reveals its hitherto hidden mysteries, and opens the window of SCIENCE into its profound depths and god-like capabilities. It discloses the LAWS of human mentality, and thereby shows us how we must live in order to be happy, and by the violations of what laws our evils and sufferings, collective and personal, are occasioned⁹. It teaches universal truth, universal virtue, and universal philanthropy. Which of its students has it not imbued with an all-pervading desire to REFORM AND PERFECT MAN? I speak not of those who merely admit its truth, but of those who have become imbued with its true spirit. Select its disciples from among our various towns and circles, and you select their cream—assort our best citizens for enterprise, talents, and moral worth. It especially teaches us OURSELVES—our faults and how to obviate them, our virtues and how to cultivate them; of which these volumes furnish samples. Before its mirror we

“See ourselves as others see us.”

It is also our spy-glass for discerning the characters of our fellow men. It spies out the true and the deceitful, the wise and the simple. Oh! I would not take the world for that power of READING CHARACTER which it confers. On the study of character we have already remarked⁵⁰. Phrenology reduces this study almost from guess-work to SCIENTIFIC CERTAINTY. It enables us to look right through all we meet. Study this science, ye who would acquire the very highest order of men

tal discipline, and learn the most numerous, the most delightful, the most practically useful lessons man can learn.

564. THE STUDY OF NATURE AS A WHOLE.

Let me not however be understood to recommend that prosecution of these sciences INDIVIDUALLY, which our separate mention of them would imply, and which is generally practised. Nature is not divided and sub-divided into sections and patches. Astronomy is not one thing, mathematics another, mechanics, natural history, chemistry, anatomy, phrenology, and each so called science another; but all are different parts of the same stupendous whole—of creation. Has nature thus divided up her works? All her operations blend into one another, like the colors of the prism. Thus, chemistry and organic chemistry are one, and the latter blends with and goes to form every species of organization, so that chemistry and organization are virtually one. Chemistry and Physiology are substantially one, and magnetism combined with organic chemistry, sets in motion the vital laboratory of all that lives: nor ceases here, but keeps all worlds and all that moves* in perpetual revolution, as well as furnishes them all with the elementary principle of all action, from insects to a universe of worlds. That magnetism forms the grand instrumentality of all human and animal motion, by means of those

* Newton's theory of motion is incorrect. So far from explaining the motions of the heavenly bodies, it conflicts with their elliptical orbits, would compel their spherical, and pre-supposes a constant exertion of Divine power applied immediately to perpetuate them; whereas, God always operates **MEDIATELY**, or by the intervention of self-acting **LAWS**. The true theory of motion will be found imbodyed in magnetism—that great agent of all attraction and of universal action, and is doubtless substantially this: Opposite magnetic forces attract and similar repel each other. Suppose the earth charged with a preponderance of one of these forces, and the sun of the other. Then add some chemical principle by which the nearer the earth approaches the sun the more of this expansive force is generated, and the farther it recedes from it, the more of the attractive and contractive is manufactured, and you have both that **SPHERICAL** motion which appertains to all the heavenly bodies, and also that **SELF-ACTING**, perpetual motion required to give all worlds their eternal and immensely powerful revolution.

attracting and contracting, repelling and expanding powers, was shown in volume VII. of the American Phrenological Journal, and will be still further demonstrated in a forthcoming work on "Magnetism, Animal and Human," by the Author. Thus, all hydrostatic, all mechanical, all electrical and galvanic, all astronomical, all chemical and philosophical sciences become merged into two elementary principles of matter, its magnetic and chemical affinities, both of which are doubtless one. And what is geography—the rivers, mountains, volcanoes, climates, and changes of the earth—but the ever-varying products of the same prolific principle? Then why not study them together since they stand thus inter-related by nature? So, too, the study of human anatomy involves comparative. The same general features pervade both, yet vary according to the habits of the various animals which may form the particular subject of study.

In conchology we have that bony structure, so essential to animal life, on the surface, whereas in the higher grades of animals it is internal. Yet the structure of all shell fish subserves a kindred purpose, as far as it goes, with the bony structure of warm-blooded animals. Then why not study these various osseous formations connectedly, not in detached parts? Both geology and natural history should always be studied in connection with anatomy, physiology, and phrenology, because all five are only different conditions of ORGANIZATION as connected with and adapted to express, different forms of mentality. All anatomists should be physiologists and phrenologists. All physiologists should be anatomists and phrenologists. All phrenologists should understand physiology and anatomy, and also geology, natural history, chemistry—UNIVERSAL NATURE. Study any science separately, and you separate "what God hath joined together," throughout his works; but study all collectively—study the vast and complicated operations of nature as inter-related to each other, and you both advance with ten-fold rapidity, and also comprehend that relation which all parts sustain to all. Nature is illimitably comprehensive, and to study her we must give commensurate extension and scope to our examination of her works. True,

she has classified all her works⁴², but not separated them. We may view them in ranges, but never limit our vision to one or two departments. Would to God that all men could comprehend the doctrine of universality or illimitable range, scope, extension which pervades all nature. How rapidly could we learn therefrom? How vast, how infinite the field of universal truth it unlocks! But as I shall not be fully understood without much more amplification and illustrative detail than can now be given to this subject, it is dismissed where it is, with the request that every reader prosecute daily, energetically, and through life, the study of **UNIVERSAL NATURE**. In so doing he is both learning the highest and most practically useful lessons man can learn, and also perpetually

565. STUDYING GOD IN HIS WORKS.

What better sample of the character and capabilities of any being can be had than that furnished by his works? In examining the products of Colt, the inventor of the revolving pistol and terrible exploding apparatus, we correctly infer that he possesses predominant **Combativeness** and **Destructiveness**. Thus saith also his **phrenology**. But in examining the works of Howard, we find means applied to the relief of human woe, and correctly infer the habitual and powerful activity of his known humanity. Their **CHARACTERS** differ as much as their works, and differ just as their works; the latter being the perfect counterpart of the former. Morse's magnetic telegraph has reference to the transmission of mind, and therefore, judged by this law, evinces its paramount activity; and such is the fact. The work is but the imbodiment of its author. Bigelow's inventions⁴³, apply machinery to manufactures; thus evincing ingenuity, guided by Intellect and controlled by **Acquisitiveness**—. Astor's acquiring works harmonize perfectly with his acquisitive character. "**BY THEIR FRUITS**," etc.

Of all mental productions this is equally true. No man can reproduce what is not in him. To put thoughts on paper, the producer must be a man of thought, and he who has thoughts cannot well write without penning them. His very effort to misrepresent his nature will exhibit that nature. Can the fool

write or speak wisdom, or the true philosopher folly? His very nonsense will be full of sense. Can those pen fine feelings and elevated sentiments who have neither? Sensualists in conduct sometimes write fine sentiments, yet such have both the grosser elements which, when wrought up by exciting causes and perverted, revel; but along with it also a fine under current of elevated sentiment, which sitting down to write calls into the ascendancy. We give what we HAVE, and nothing else, though our superficial observation by no means always READS these outer manifestations of character correctly. But "ACTIONS speak still louder than words." As a man habitually does, so he is. This rule extends equally to all animals. The fox digs him a hiding place because he is secretive. His works are the NECESSARY PRODUCTS of his character. And thus of universal being. Shall then the Deity form the only exception to this law of things? Shall he violate a law he has instituted? Shall he do one thing, and BE another? Is the Author of all truth himself deceptive? Is he inflexibly just in his works yet unjust in his nature? Is he almighty in his works yet feeble in power? No, none. Nature is but a transcript of her Author. His works are the perfect imbodiment of himself. All that they are, he is. Are they infinite in variety and range? So is he. Are they all directed to happiness as their "chief end?" He, too, is Infinite Goodness; and this provision for the illimitable happiness of man⁹—of all sentient being—is but the almighty gushings of his benevolent soul. Are his works perfect specimens of mechanical contrivance and execution? He, too, is the Infinite Architect of the universe, and as skilful in executing, as surpassingly wonderful in invention. Oh! the perfection and infinitude of his mechanism! Are his laws inflexible? He too, "hath no variableness nor shadow of turning." Hills may be removed, and mountains leveled, but "the statutes of the Lord endure forever!" Do his laws punish their every transgression with pro rata severity¹⁰? It is because their Author is inexorable Justice itself, extended throughout the universe, and "from everlasting to everlasting." Are his works inimitably beautiful and perfect, both in and of them-

selves, and all their adaptations to one another? It is because He is infinite Beauty and Perfection united, and therefore im-bodies them in every work of his hands. Are all his works governed by perfect method, and subjected to "heaven's first law?" He is that law itself, and the mighty regulator of all that is. Do the sun and stars rise and set, the moon and seasons change with perfect regularity, and all nature observe "appointed times," and is not he the great Timist of the universe? Has he created music and is he not the Musician of the universe, not in sound merely but in the unmarred concord and blending of all his creation? Has he instituted illimitable duration⁴⁰⁰, and is he too not Eternal—without beginning and without end? Has he devised natural and verbal Language, and does he not speak, especially by means of the latter, to all rational beings in the language of universal nature, "Learn and obey my laws?" Are his works uniform, and ranged in infinite series? He, too, is the fountain of all induction, is inductive truth itself. Is every effect CAUSED? He himself is Infinite Causation, and works by MEANS. Are his plans infinite in number, variety, perfection, and power, and is He less infinite? Does his stupendous system of causation hurl worlds through illimitable space as if trifles, yet descend to create the most delicate and minute structures conceivable, and is He, too, not as infinite in his littleness as in his might? Oh! who can duly admire either the perfections of nature or of Nature's God! Give me the eloquence of angels, and I will expend it all in discoursing on the study of "GOD IN HIS WORKS." Can the devoted student of God as manifested in nature be other than devout? No naturalist can be an atheist. None can love nature without loving her laws and her God. No lover of nature can be a votary of sensuality in any of its forms. All nature is one vast system of Theology, one magnificent temple dedicated to Divine worship, and every lover of its study is a devout worshiper at its shrine. To be truly religious is to be truly scientific, and to be truly learned is to be equally devout. Science and morality are husband and wife—rather, are parts of each other and of one divine whole.

Enamour men with nature and you enamour them with moral purity and holiness. Teach children God as manifested in his works, and they will revere his name and love his attributes as long as one vital spark remains. No child should ever be taught a fact or principle in nature, without thereby and therein being taught their AUTHOR. The priest and the schoolmaster should be blended in the same office and individual. The religious teacher should base all his appeals to conscience—all his addresses to the religious sentiments—in scientific facts and principles. By these means he could come down on the consciences of men with irresistible power, and fasten them in the bonds of eternal truth as in a vice. Science is tame without religion, and religion without science a Samson shorn ; but unite them and they will save the world from vice, and win all mankind to virtue. May God teach us all himself in his works, and by thus exhibiting his infinite perfections, fill our souls with gratitude for his goodness, adoration for his character, love of his attributes, and desire to learn more and more of his excellences, and become more and more like him, throughout time and to all eternity !



567. THE DEVELOPMENTS REQUISITE FOR PARTICULAR AVOCATIONS.

Though the legitimate subject-matter of the work proper may now be considered as fairly concluded, yet the application of this whole series of volumes to self-improvement would be incomplete, unless applied SPECIFICALLY by way of pointing out the organs requisite to success in the various occupations of life. The great call for this species of information still farther enhances its value. Indeed, the right choice of a profession or business is of the utmost importance. Many readers, still undetermined how to cast their destinies for life, would be enabled to make a right selection by knowing what faculties are especially requisite to success in given avocations, and whether they have these organs. How many are virtually tied hand and foot by being in a business which they cordially dislike, and in which they can never excel, but who, if pursuing some avocation to which they are by nature adapted, might hope to rise, whereas they can now never hope to attain mediocrity. Thus tied to a dead carcass, their pride of character becomes humbled, their ambition blasted, efforts paralyzed, and their prospects cut off for ever, by the difficulties attendant on making the required change. All this might be obviated, ambition gratified, and success insured by ascertaining for what occupation their organs naturally qualify them, and for what they are unfit. This principle applies equally to the choice, by parents and guardians, of occupations for their children and wards, and to the choice of apprentices, clerks, servants, and the like.

But, the occupation finally selected, how to rise in it is the next great object of inquiry. Its answer is, "cultivate those faculties which give success in the selected avocation." Having already pointed out the means of cultivating the various faculties, it remains only to show what particular ones are especially required in particular kinds of business, to inform all just what steps to take—what powers to cultivate—in order to promote the particular capabilities they or their children may require. But to our subject. To become

568. A GOOD TEACHER

Requires an active temperament in order to prevent idleness, and to impart that vivacity of mind and quickness of perception so essential to enable him to awaken and develop the minds of pupils; large Perceptives with large Eventuality, in order to give an abundant command of facts, and to pour a continual stream of INFORMATION into their minds; large Language, to speak freely and well⁵⁶⁴; large Comparison, fully to explain, expound, and enforce every thing by appropriate and copious comparisons⁵⁶⁷; large Human Nature, to study out the respective characters of each pupil, and adapt instruction and government to their ever-varying capacities and peculiarities, that is, to know "how to take them;" full or large and active Causality, to give them material for thought, explain causes, and answer their questions⁵⁶⁶, and stimulate this inquiring faculty to action⁵⁶⁸; good lungs, to endure much talking; only moderate Continuity, so that he can turn in quick succession without confusion, from one scholar or thing to another; fairly developed Friendship, to enable him to get and keep on the right side of parents; large Philoprogenitiveness, to give that fondness for children which shall enable him to ingratiate himself into the affections of pupils⁴¹⁰—; large Benevolence, to impart genuine goodness as well as thoroughly to interest him in promoting their welfare; large Firmness, to give fixedness of purpose; fair Self-esteem, to promote dignity and secure respect; yet not too much, especially if combined with active Combativeness and Destructiveness, lest he becomes too arbitrary; and the latter organs must not be too large, lest they render him unduly severe, and induce him to try to FLOG learning or goodness into them—; nor too small Combativeness or Destructiveness, lest he should become too inefficient; large Conscientiousness, to deal justly and to cultivate in them the sentiment of right and truth; a fully developed moral region, to continually stimulate their higher, better feelings; large Ideality, to render him polished and refined, in order that he may develop taste and propriety in them; and an excellent general head, because this occupation stamps the pupils with the predominant traits

of their teacher's intellect and character. He also requires that training or discipline of the faculties which shall give him the full control over them, and much patience and self-government. Few if any avocations require more talents or moral worth than teaching. The idea that anybody can teach who can read, write, and cipher, is altogether erroneous. The best or none.

To those who may select this avocation, allow a single item of advice. Make your pupils LOVE you. This will obviate all requisition for the whip, yet give you unlimited influence over them. To do this, do not be austere, but affable, kind, good-natured, even when provoked, and familiar. Especially give them GOOD ADVICE as well as good instruction. Next to this, secure the good-will of their MOTHERS.

569. A CLERGYMAN

Requires the mental or motive mental temperament, to give him a decided predominance of MIND over his animal tendencies, and to impart the thorough and substantial to all he says and does; a large frontal and coronal region, the former to give him intellectual capacity, and the latter to impart high moral worth, aims, and feelings, elevation of character, and blamelessness of conduct; very large Benevolence and Conscientiousness, to render him truly philanthropic and disinterested, and willing to sacrifice personal interests upon the altar of human happiness, and to create a strong desire to make men HAPPIER by making them BETTER; large Veneration, to imbue him with the truly godly and prayerful, so that he may excite these feelings in those around him; small Secretiveness, so that he may declare the whole counsel of God, without daubing with untempered mortar, or hide the truth in round-about expressions; small Acquisitiveness, so that he may care little for money as such, and be indisposed to barter and traffic—yet he should have a frugal wife and a generous people, so that he may not be embarrassed or distracted by pecuniary difficulties, but be enabled to give his entire energies to his work—; large Adhesiveness, so that he may make all who know him LOVE him, and thus win them over to the paths of truth and right-

eousness; only average Combativeness, so that he may be mild, yet enough to give force of character and great MORAL courage to dare to utter the whole TRUTH, cut where it may; large Philoprogenitiveness, to render him interested in the moral improvement of children; full or large Ideality, so that he may not offend by his coarseness, but may please with his elegance of style and ease of manners and delivery; large Comparison to render him clear and pointed, and to enable him to expound, explain, illustrate, and clear up knotty points, make himself fully understood, and carry conviction to the understandings of all; full Hope to render him cheerful; large Language to enable him to speak with ease and perspicuity; full Concentrativeness so that he may impart oneness to his discourses, yet not too large, lest he become prosy and prolix; and a uniform, well-balanced head, so as to render him consistent in conduct and correct in judgment, and also excite the better feelings in those who come within the sphere of his influence. His great office being to develop the intellectuality and the morality of mankind, these elements should predominate in himself, so that these faculties in him may perpetually excite similar faculties in all around him. None but those who have superior moral and intellectual developments, along with an excellent physical organization, should enter this calling. Their very office puts a mighty moral influence into their hands, which none but the good should be allowed to wield, lest they wield it for evil.

Large Veneration, however, is by no means indispensable to qualify one for this calling. Indeed, REFORM preachers have less Veneration than Benevolence and Conscientiousness. If religious doctrines and practices were entirely right, the more Veneration the better, but they require to be reformed and improved, which too large Veneration prevents.

570. PHYSICIANS

Require a strong, robust temperament, so that they can endure hardship, fatigue, and want of sleep and food, and stand all weathers and immense labor; large Perceptives so that they may study and apply anatomy, physiology, chemistry,

and botany, with skill and success ; large Benevolence so that they may really desire to alleviate suffering ; fair Destructiveness, lest they shrink from inflicting the pain requisite to cure, yet not too large lest they become harsh, and inflict unnecessary pain ; large Constructiveness, to give them skill in the surgical part of their business ; large Amativeness, to render them a favorite among woman—a faculty in which they generally abound—yet not too much lest they abuse their required intimacy with her ; large Philoprogenitiveness, so that they may get on the right side of children ; large Combative-ness, to render them resolute and prompt, and to give them presence of mind ; large Cautiousness, to render them judicious and safe ; and a large head to give them power of mind. Physicians, too, more than any other class, require that liberality of views, that openness of conviction which shall allow them to keep up with the times, and adopt all improvements in the healing art that may be made. No other art is equally imperfect, or more imperiously demands reform and advancement.

571. LAWYERS

Require the mental, or mental vital temperament, to give them intensity of feeling and clearness of intellect ; large Even-tuality, to enable them to recall law-cases and decisions, and to recollect all the particulars and items of the case ; large Comparison, to enable them to put together and compare different parts of the law and evidence—to criticise, cross-question, illustrate, and adduce similar decisions and cases ; large Mirthfulness, to enable them to ridicule and employ the reductio ad absurdum in argument ; large or very large Combative-ness, to make them love litigation and encourage strife, instead of reconciling the parties ; large Hope, to make them expect success and confidently promise it to their clients ; small Veneration and Marvellousness, and large Self-Esteem, to make them well-nigh impudent, and enable them to brow-beat and deny ; large Combative-ness, Destructiveness, and Mirthfulness, to render them sarcastic, cutting, and biting in their repartees ; large Acquisitiveness and Self-Esteem, to make

them think their services particularly valuable, and thus exact large fees; large Secretiveness and less Conscientiousness, so as to allow them to engage in unjust causes, without scruples, and wrong their opponents out of their just dues, by quirks of the law, whenever possible, as well as to plead a bad cause, and violate truth with a hard face; large Language to give them a limber tongue, so that they can talk much yet say little, and substitute verbosity when they lack argument; large Ideality, to supply the place of facts by ingenious suppositions and a fruitful fancy; a practical, showy intellect, but not a high moral head, yet abundance of selfishness and gammon. I speak now of common lawyers, and of law as now practised, in which a palpable want of truth and justice is too apparent to require proof; and I here recommend no one to study law who has high moral feelings, and wishes to retain them; because the very nature of this calling tends to blunt them. They will also be required to do much that is revolting to all our better feelings, or else to lose clients. Those who would rise in this avocation, must make up their minds to pocket their consciences, and encourage hard-faced selfishness.

Yet we require a total change in both law and the way it is practised—require HONEST lawyers—now a scarce article indeed. The sole end of all law should be to secure RIGHTS and prevent wrongs. Such ends require little selfishness, sound judgment, and predominant moral sentiments. Yet such lawyers try very few causes, but generally bring the parties to a mutual compromise and reconciliation beforehand—ininitely the preferable course, and one which lawyers should always recommend and try to effect, however it may diminish their fees. Of law, as now practised, all must entertain a very poor opinion, and discourage from entering this profession.

572. STATESMEN

Require a temperament of much power to give strength of mind, and a large and well balanced intellectual lobe, to enable them to see through great public measures and choose the best course, together with high, narrow heads, to render them DISINTERESTED, and seek the PEOPLE's good, not selfish emolu-

ment. Few callings require better men, or more general philanthropy; yet few have less. I hardly know the politician who has a superior intellectual and moral head. Many have intellects, yet few have high moral feelings. Politicians are usually a most selfish, artful set, and must be so to adapt themselves to politics as now conducted. Still, good men should engage in it so as to REFORM it, yet such will meet with poor encouragement.

573. EDITORS

Require a strong and active temperament and brain, in order to enlist and interest their readers, carry them along with themselves, and describe well; large Individuality and Eventuality, to collect and disseminate incidents, facts, news, and general information, and give a PRACTICAL cast of mind; large Comparison, to enable them to illustrate, explain, expound, criticise, pick flaws, show up opponents, and the like; full or large Combativeness, to render them spirited and ready for conflict, as well as to put force and energy into their writings, and a good moral organization, so that they may promote morality and general excellence; large Language, to render them spicy, racy, and facetious, and enable them to ridicule what is absurd; large Ideality, to give taste and elevated sentiments^{516 534}, and large Language added to a flowing, elegant style, and a happy talent for description; and if they also read proof, large Form, to spell correctly and detect typographical errors.

Yet different organizations are requisite in editors of different things. Thus, a political editor requires a very different organization from a scientific. The former requires a much less powerful organization and brain, and more practical talent, yet less of the profound, deep, investigating, and substantial. Editors of scientific works require a large intellectual lobe, large reflectives, especially Comparison and high moral sentiments, so that strict TRUTHFULNESS may characterize their version of all they write.

574. AUTHORS

Require the mental-motive temperament, to impart great strength combined with great activity of mind, together with clearness, force, and impressiveness; high and strongly marked heads, to enable them to pen what is worth perusal and re-perusal; well balanced heads, so that they shall take consistent and correct views of subjects; especially large and evenly balanced intellectual lobes, so that their ideas may be sound, comprehensive and consistent; large moral organs, to infuse elevated moral sentiment into all they write; especially predominant Conscientiousness, to give them the highest and the strictest regard for TRUTH; full Marvellousness, to give them an intuitive perception of universal truth; smaller sensual propensities and little selfishness; more especially large or very large Comparison, to give point, clearness, appropriateness, and keen discrimination in the use of words and arrangement of sentences and thoughts; fair Language, but less than Intellect, that they may condense; great Ideality, that their sentiments may be pure and diction elevated; large Veneration, that they may inculcate religious worship; and predominant Benevolence, in order to write so as to benefit mankind. In most kinds of authorship large Causality is indispensable, yet not in writing tales or compiling events. Indeed, the tasks of few are equally laborious, and none require stronger intellectual capabilities, or a higher tone and more elevated standard of moral character and conduct.

575. PUBLIC SPEAKERS

Require a predominance of the vital-mental temperament, to inspire them with the ardor and enthusiasm required to enlist the feelings of an audience; a highly wrought organization, to give them pathos, clearness, and flow of idea and feeling; large social organs, to give them access to the feelings if not affections of listeners; large Combativeness, to infuse life, positiveness, and spirit into what they say; not too much Secretiveness, lest they become ambiguous and unwilling to open their whole souls; neither too much Cautiousness nor Veneration, lest they become embarrassed, nor too little, lest they become

reckless and impudent; large Approbativeness and Self-Esteem, to render them aspiring, and dispose and enable them to "lead off;" large moral organs, to purify and elevate their ideas and conceptions; large Ideality, to give them brilliancy and fertility of imagination, and refinement of sentiment, purity of feelings, and an elevated style; large Imitation, to enable them to mimic, describe, and impart the life-like to their efforts; large Mirthfulness to render them amusing, and full of the ludicrous, with large Eventuality, to intersperse a great variety of illustrative anecdote, give them a full command of their subject, and enable them readily to throw their ideas into shape, as well as to give them the required detail and amplification; large Individuality, to render them specific and distinct, and enable them to personify and set matters before their audiences as if speaking present realities; large Language, to give them a ready command of words, and a flowing, easy, happy delivery, and with Eventuality, Ideality, and an excitable temperament, to render them eloquent and impassioned; together with large or very large Comparison, fully and appropriately to illustrate every idea, and render all they say apt and appropriate; and large Agreeableness, to render their "mode and manner" acceptable and taking; and large Human Nature, to enable them to catch and control the minds of the audience; along with a superior temperament and moral and intellectual lobes. None but good men should dare to become public speakers.

576. POETS

Require the highest order of both temperament and developments. Poetry depends more on the physiology than the phrenology. It consists in a spiritual ecstasy which can be better felt than described. Not one in many thousands of those who write verses have the first inspiration of true poetry, yet to detail the conditions requisite for this avocation would unduly protract.

577. LECTURERS

Require fine, active, and yet strong organizations; full intellectual lobes; especially fullness from the root of the nose

upwards, together with high foreheads, to give them facts and thoughts in abundance ; large Language to render them fluent and copious ; amply developed Ideality to render them refined and eloquent ; sufficient Self-Esteem to prevent diffidence and impart dignity, yet not so much Approbativeness as to render them vain or egotistical ; a high coronal region, and large social organs so as to make friends ; good Combativeness to impart spirit and efficiency to both manner and matter ; not too much Cautiousness nor yet too little, and in general, well balanced heads. Yet here, too, lecturers on different subjects require different organizations.

578. THE PHRENOLOGIST

Requires a temperament of the highest order, exceedingly quick yet strong—to impart both mental activity and power, and enable him to run rapidly yet correctly through the vast multiplicity of conditions which go to form character ; great strength of organization to apply his entire energies with great power to the work in hand ; an ample intellectual lobe to give power of mind, and in connexion with the required activity, to impart cogency, pointedness, efficiency, and distinctness ; an evenly balanced intellect, so that he may take into full account all those conditions which influence character and conduct ; great Individuality so that he may perceive those conditions at one glance, and see all that can influence his ultimate conclusions ; ample Eventuality to remember all he observes ; great Comparison to combine and comprehend all the relative sizes of all the organs with each other, and with the existing temperament—a truly Herculean labor, and one which requires the utmost tension of this faculty ;—a copious flow of Language to facilitate description, and convey the results arrived at ; good Mirthfulness to spice the whole with the lively and exciting ; good Causality to investigate and present the great principles and general bearings of its philosophy ; not too much Secretiveness lest he become ambiguous and avoid direct declarations ; large Philoprogenitiveness to gain him the good will of those children he may be called upon to examine, so as to render his advice acceptable and dispose them to follow it ; large Benev-

olence thoroughly to interest him in the welfare of his patrons, and impart advice wherever required, as well as to apply this science to human improvement and happiness ; and a high coronal region so as to inspire him with high moral feelings, and give all he says and does an elevated moral aspect ; together with the strictest sense of justice and a well balanced head, especially intellect ; because as he is, so will be his examinations and views. Predominant Causality and deficient Individuality render him too slow in arriving at conclusions ; yet this organization is not incompatible with his making excellent examinations, provided the required time is taken.

579. MERCHANTS

Require much sprightliness and activity, to enable and dispose them to move easily and rapidly, and prevent indolence ; large Acquisitiveness to impart a desire and tact for making money, driving bargains, buying, selling, exchanging, and handling money ; large Hope to promote enterprise, yet not too large unless checked by Cautiousness, lest they buy more than they pay for, and dip so deeply into speculations as to fail ; at least full Cautiousness to render them provident and safe ; large perceptive to give quick and correct judgment of the qualities, texture, nature, and like properties of goods, and enable them to buy and sell well ; large Ideality and fair Color to give them correct taste and good judgment of colors ; good Calculation to impart rapidity and correctness in casting accounts ; large Approbativeness and less Self-Esteem to render them courteous, polite, affable, as well as emulous to please and excel ; smaller Continuity so that they can go from one customer to another and back without confusion, and transact correctly a great multiplicity and variety of business in a short time, though interrupted ; full Adhesiveness to enable them to make friends of customers, and thus retain them— ; full Constructiveness to impart manual dexterity in packing, unpacking, and wrapping up goods, and tinkering up things about the store ; fair Secretiveness to give a due degree of policy, and keep to themselves what they do not wish to divulge ; good Conscientiousness so that they may deal fairly

and adopt the "one price" system—yet as this business is too often conducted, conscience is only in the way, and must be kept in their pockets—and a practical, active organization rather than one of power or depth.

580. MECHANICS

Require strong constitutions, with a predominance of bone and muscle, to give them the required muscular power and love of labor, and enable them to endure it, as well as to impart strength and durability to their work ; large Constructiveness and Imitation, to enable them to sharpen and use tools with dexterity, make after a pattern, and easily learn to do what they see done ; large perceptive faculties to give the required judgment of matter and its fitness and physical properties ; the larger Causality the better, so that they can take advantage of their work—plan, adapt means to ends, contrive, "make their heads serve their hands," invent, begin at the right end, and know how to take their work ; large Firmness and Combative-ness, to give them that force, resolution, and indomitable energy, requisite in overcoming that perpetual array of obstacles required in all kinds of work, and accomplish what they undertake ; large Calculation to enable them to make all kinds of calculations requisite in their several branches of the mechanic arts ; large Order, to keep their tools all in their places, and to impart method to both what they do and how they do it ; Ideality greater or less according as their work is fine or coarse ; full or large Acquisitiveness, to interest them in what they do, render them saving of materials, and economical of both time and property, as well as good at bargains and desirous of making property, and other organs according to the particular branches they may follow.

The lighter kinds of mechanical avocations, such as goldsmiths, tailors, and the like, require less muscular strength and power than builders, whether of houses, ships, bridges, and other heavy works which require great durability and resistance. Indeed, such should not have a large vital apparatus, because it will render them unwilling to endure the required confinement. They also require more of that taste imparted

by Ideality. Shoemakers, on the other hand, should possess strong constitutions, yet do not necessarily require much Ideality, or Imitation, or Causality, but require Inhabitiveness, to make them love their benches as their homes. But the reader can easily carry out these differences for himself.

581. ARTISTS

Require a highly organized temperament—one exceedingly fine and active, as well as pure and elevated, the mental-vital being the best—together with very large Form, Size, Imitation, Constructiveness, and Ideality, to enable them to draw and copy to life, and also impart taste and finish to their productions; large Order and Perceptives generally; large Moral Sentiments, to impart moral tone and elevation; full or large Approbativeness, to make them ambitious and emulous to excel; and large Comparison and Human Nature. In other respects they require the developments requisite for mechanics, except that Calculation and Destructiveness are by no means indispensable in most of the fine arts.

582. PAINTERS

Require, besides the organs requisite for artists, large Color, to enable them to judge of, mix, and apply colors with accuracy and beauty; large Mirthfulness and Language, to enable them to amuse their customers, and thus give them a pleasant expression of countenance for transfer to the canvass; predominant Imitation, to render their pictures life-like; and especially large Ideality, to give an exquisiteness and air of elegance to both the coloring and the entire picture. Amativeness should also be large yet unperverted. They require a rare organization. Many can draw, engrave, and the like, yet few can PAINT.

583. FARMERS

Require the motive, or the motive-vital, or vital-motive temperament, to make them fond of work, and enable them to endure it; large Constructiveness, to enable them to use farming utensils; large Inhabitiveness, to make them love their

226 ORGANS REQUISITE FOR PARTICULAR AVOCATIONS.

farms, and be contented at home, with some Approbativeness, to make them take some pride in improving and adorning it; large Philoprogenitiveness, to make them fond of children and of feeding and rearing animals,* and improving their breed; large Adhesiveness and Friendship, to render them neighborly and obliging; a good Intellect, to give them the intellect requisite to manage and arrange matters, and dispose them to improve rainy days and odd spells in study; large Acquisitiveness, to render them frugal, industrious, and thrifty; large Order, to keep all their things in place; and a good development of the perceptive faculties, so that they can judge accurately of land, crops, and the value and uses of things. The developments requisite for good farmers do not differ essentially from those requisite for mechanics of the heavier kind of business⁴⁸⁷.

Gardeners require a similar organization with larger Ideality, Form, Size, and Color.

584. ENGINEERS

Require much the same organizations as farmers and the heavier mechanics, and especially, large Form, Size, Constructiveness, and Cautiousness. In addition, civil engineers require in particular large Calculation and Locality; and mechanical engineers require fully developed Weight, and the vital motive of temperament.

585. SEAMEN

Require strong constitutions; a predominance of the muscular and vital temperaments; great Combativeness, Destructiveness, and Firmness to give force of character, intrepidity, courage, and presence of mind in times of danger; large Cautiousness to render them safe; large Alimentiveness to enable them to relish plain food; large Perceptives, especially Form, Size, Weight, and Order; and commanders require efficient Causality.

* The lower portion of this organ gives a fondness for pet animals; the upper, for our own children.

586. LANDLORDS, BOARDING-HOUSE KEEPERS, AND COOKS.

Landlords require the vital, good-natured, enjoying temperament, so as to contribute to the happiness of all around them, and take vexations coolly; large Friendship to keep their customers by making them feel at home, together with large Benevolence to render them kindly disposed, attentive to the wants of guests, and willing to serve; fair Acquisitiveness in order to make a living; larger Approbativeness than Self-Esteem, to render them more complaisant and familiar than distant or haughty; large Amativeness to render them polite and acceptable to the other sex; and more especially large Alimentiveness to render them good caterers for the table, because those who love the good things themselves will both know when things are good, and insist on having them good—the great secret, after all, of getting and retaining this sort of custom.

Cooks also require large Alimentiveness to give them a relish for savory dishes, in order to induce them to make food palatable. Those who have small Alimentiveness have no “slight” or success in culinary matters. They also require large Acquisitiveness to “save the fragments,” if it is only with which to feed the poor. A leading element of a good housekeeper is being a good cook, that is, having a hearty appetite.

587. PRINTERS

Require full or large Continuity, to enable them to keep steadily at their work; full or large Acquisitiveness to give them industry; large Constructiveness to give them manual skill and dexterity; large Form and Size to render them correct in spelling and good proof-readers; large Order to keep things in their places; good Calculation, and the more Intellect the better.

588. MILLINERS, SEAMSTRESSES, FANCY WORKERS, AND THE LIKE,

Require much activity to impart industry, nimbleness, and dexterity; large Continuity to facilitate their steady application to the matter in hand; large Constructiveness to give them

the required "slight of hand," "know how," and skill in all kinds of sewing; large Imitation to enable them to make after a pattern; large Ideality to give an air of neatness and taste to their work when it is done; good Form and Size to aid them in fitting, and making garments set well; good Acquisitiveness to render them saving of materials, and enable them to cut in as saving a manner as possible; and fair intellectuals to enable them to bring mind and judgment to their tasks. The finer the work the more Constructiveness, Ideality, Imitation, Form, Size, Color, and Order are required. These, together with a quick and vigorous Intellect are particularly requisite in milliners, mantuamakers, and the like who conduct business.

Factory operatives require amply developed Constructiveness, Weight, and Continuity, along with good general health. No female should either sew or work in the factory for a livelihood till past thirty; that is, till their constitutions are fully matured.

Having thus shown what developments are required for success in the most common avocations of life, the reader is now furnished with samples or data from which to decipher the organizations required by other occupations. It should, however, be observed, that some organs should always be large, be the occupation what it may. Firmness, Benevolence, and some others, should always be amply developed. The more intellect the better, in all kinds of business, because mind facilitates the accomplishment of whatever we undertake. High moral sentiments, too, should be possessed by all, whatever be the avocation; nor should any business be prosecuted which is incompatible with their required ascendancy. Though some pursuits are impeded by a full development of some organs—as mercantile by large Continuity, legal by large Conscientiousness, and thus of some others; yet such exceptions are rare, and the general rule is that the larger any and all the organs, the better for any and every occupation. Yet some organs are INDISPENSABLE to success in some pursuits, while others may be deficient without essential injury. Nor can any engage in any pursuit for which they are not naturally qualified, without incurring the penalty of both failure—

and a failure here is a failure for life—and dislike; for we like those pursuits for which we are naturally fitted, and dislike those for which we are not. And those who are qualified for particular avocations, should not only engage in them, but also habitually CULTIVATE those faculties required by their respective callings, in order thereby still farther to perfect their capabilities and enhance their success and happiness.

589. IN CONCLUSION,

Let us all improve to the utmost limit those god-like gifts conferred upon us by nature. Improve them on our own account, that we may reap perpetually that ever increasing harvest of happiness, thereby placed within our reach. "He that is wise is wise FOR HIMSELF." Nor merely for our sakes, but for the good of our fellow man. In this republican land, the talents of all her sons become PUBLIC PROPERTY; so that the gifted have no RIGHT to deprive their fellow citizens of the benefits of all their capabilities; and to do so is the worst species of robbery, because a robbery of the most valuable of all possessions—that of MENTAL wealth. But, above all, let us bear in mind perpetually our accountability to the AUTHOR of these transcendent endowments for their cultivation and right exercise. Shall we condemn the Giver by burying the gift in neglect? Shall we continue to crawl when He has capacitated us to fly; yea, and that on the wings even of angels? Nor soar in this life merely, but to all eternity; for the more we improve our talents in this life, the more, a hundred fold, will they thereby become augmented against the harvest of eternity⁴⁹⁸; but the more our neglect of their cultivation deteriorate them in this life, the more unfit shall we be for that which is to come.

